TECHNOLOGY DEPT.

A National Newspaper for Every Branch of the Industry

First Copy

Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · AVIATION · PARTS · ACCESSORIES · TIRES

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PUBLIC LIBRARY APR 30 1932 DETROIT

March Production Highest Since September, '31, Final Check-up of Figures Shows

First Quarter Output, However, Is Almost 50% Below the Total for the Same Period Last Year

Washington, April 28.—March factory sales of automobiles in the United States topped those of February, while sales of passenger cars were larger than in any month since last September, according to figures just issued by the Bureau of the Census.

Canadian factory sales also increased markedly in March, the total mounting higher than it has since May, 1931, according to the figures of the Dominion Bureau of Statistics.

The March total of factory sales of automobiles in the United States was 118,959, as compared to 117,418 for February and 276,405 for March, 1931. Passenger cars sold amounted to 99,325, comparing to 94,085 for February and 230,834 for March, 1931. This passenger car total is the largest attained since last September, when 109,087 sales were registered. Truck sales for March were 19,560, as compared to 23,308 for February and 45,161 for March, 1931. The seventy-four taxicabs included in the figures compare to twenty-five for February and 410 for March of last year.

Total factory sales for the first three months of 1932 amount to 355,721, as compared to 668,193 for the corresponding period of 1931 and 1,000,023 for the first three months of 1930.

Canadian factory sales for March, as previously announced in Automotive Daily News, amount to 8,318 as compared to 5,477 for February and 12,993 for March, 1931.

Canadian factory sale totals for the first three months of 1932

(Continued on Page 2)

"BUY A NEW CAR" CAMPAIGN JOINED BY ETHYL CORP.

New York, April 28.—As a further step in the co-operative movement between the motor vehicle manufacturers and automotive fuel producers, the Ethyl Gasoline Corporation has joined the "Buy a New Car" campaign, it was announced at the headquarters of the company in the Chrysler Building.

"This step does not mark a change in the policy of the Ethyl Gasoline Corporation," said J. C. Taylor, sales manager of the organization, in making the announcement. "The role of this company always has been that of the intermediary seeking to promote friendship and closer relations between these two great divisions of the automotive industry."

The Ethyl Corporation is going farther than merely to announce this stand, he asserted, by running a series of paid advertisements featuring the slogan in a score of leading periodicals.

Evidences of the increasing co-operation between the motor car makers and fuel producers were apparent at the 1932 automobile shows, Mr. Taylor pointed out, and again at the recent spring showings held

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M. E. M. A. REVAMPS CREDIT DEPARTMENT; SEPARATES GROUPS

New York, April 28.—Changes in the credit department of the Motor and Equipment Manufacturers' Association, announced by A. H. Eichholz, general manager, will become effective May 1, whereby all matters pertaining to manufacturers' credits will be centered in the association's Detroit offices; while all matters having to do with wholesalers' credits and with export distributors' accounts will be concentrated in the New York office.

Under this improved arrangement A. H. Fagan has been named to the position of manager of wholesalers credits, and T. M. Simpson, recently appointed manager of the Detroit office, becomes manager of manufacturers' credits. The change also results in the transfer of John E.

(Continued on Page 11)

COMMR. LEWIS SEEKS DRASTIC BUS-TRUCK CONTROL MEASURE

Washington, D. C., April 28.—Unregulated competition of motor buses and trucks would in time destroy not only the railroads of the country but would also impede the development of "proper intrastate and interstate motor transport," according to a separate opinion of Ernest I. Lewis, interstate commerce commissioner, in connection with the commission's report on rail-motor co-ordination. (Docket No. 23400.)

Commissioner Lewis asserted that he would go further than the majority in the field of motor regulation and recommended legislation which will put regulation of trucking rates as well as bus fares in the jurisdiction of the commission.

The commission's report recommended only the control of bus fares, although permits would be necessary for truck operations. This was said to be a "tentative step" to pave the way for additional regulation when the commission becomes better informed as to motor operations.

MACHINE TOOL BUSINESS UNIMPROVED OVER MARCH

New York, April 28.—Nothing has occurred to relieve the extreme dullness of machine tool business. April certainly will be no better than March, and the official report of sales, compiled each month by the National Machine Tool Builders' Association, may disclose a decline from last month, which was the poorest of the depression period.

March Truck Sales in 44 States And D. of C. Up 24% Over Feb.

Estimated Total for First Quarter This Year Indicates A Decline of 40 Per Cent. From First Quarter 1931

Detroit, April 28.—Figures have just been released by R. L. Polk & Co. covering commercial vehicle sales in forty-four states and the District of Columbia for March, 1932, showing a total of 16,147 units. The states which have not yet reporetd are Georgia, an habitual absentee, with no reports made so far this year; California, Kansas and Wyoming. Of the four, California is the only heavy buyer unaccounted for to date.

The 16,147 truck units sold in March in these forty-four states and the District compare with 13,093 sold in February of this year in the same territory and with 28,041 sold in March, 1931.

The gain over February truck sales amounted to about 24 per cent. The decrease under the total for March, 1931, is somewhat over 42 per cent.

If the present ratios hold, as they probably will for the last four states to report on March commercial vehicle sales, the total for that month will be about 18,000 units. With this figure in hand we can get a pretty accurate idea of how commercial sales went in the first quarter of 1932.

The state of Georgia has not yet reported for any month in 1932, but with this one state out total truck sales in the first three months should be about 46,734. Georgia may be expected to add enough sales to bring the total up over the 47,000 mark. This compares with 78,420 truck units sold during the first quarter of 1931. This is a drop of approximately 40 per cent.

DREYSTADT NAMED WORKS MANAGER FOR CADILLAC MOTOR CO.

Detroit, April 28.—Appointment of Nicholas Dreystadt to the position of works manager of the Cadillac Motor Car Company, succeeding A. U. Widman, resigned, was announced today by Lawrence P. Fisher, president.

Dreystadt, who for the past six years has been general parts and

NICHOLAS DREYSTADT

service manager, brings to his new position an unusually well-rounded automotive experience that covers not only national parts and service merchandising but an extensive shop experience both in this coun-

(Continued on Page 11)

KANSAS CARRIER TAX BEFORE SUPREME COURT

Washington, D. C., April 28.—Arguments in support of the Kansas tax on "private motor carriers" were heard by the Supreme Court of the United States. The case is entitled Continental Baking Company vs. Woodring, No. 677. The appellant company submitted briefs, but made no oral argument. The state was represented by Walter T. Griffin.

In their brief, the appellants argued that the exemption of carriers which operate wholly within a city or village of the state is unconstitutional.

MARYLAND WARNS AGAINST ABUSE OF FLEET RATES

Baltimore, Md., April 28.—The state insurance commissioner, William C. Walsh, has notified companies writing automobile insurance in Maryland that fines of $500 or revocation of licenses will be imposed as penalties upon agents and companies that insure individually owned motor vehicles improperly under fleet rates.

Mr. Walsh explained that a ruling on this subject, issued June 5, 1930, is being violated "by numerous companies and by many agents." If further violations occur, he said, the penalties prescribed by law will be enforced.

JOBBER ADVANTAGES LISTED IN FOLDERS ISSUED BY M. E. W. A.

Chicago, April 28.—Eighteen advantages in favor of the automotive jobber are enumerated in the first of a series of monthly folders approved by directors of the Motor and Equipment Wholesalers Association for nationwide distribution over the imprint of various regional group associations affiliated with the national organization.

The folder is entitled "Reasons for Patronizing Your Jobber." At the same time it was made known today that subjects for other folders in the association's bombardment to strengthen the position of the wholesaler and make him better appreciated have been decided upon. The titles for future literature include "Financial Assistance Easily Obtained From Jobber," "Profitable Suggestions Proposed by Jobber Salesmen," "Rapid Turnover for Jobber Patrons," "Losses Reduced by Jobber," "Jobbers Make Prompt Deliveries" and "Credit With Jobber an Asset."

"Successful business results from rapid turnover by buying from wholesalers to meet current needs," states the current folder, in part. "Your wholesaler, used as your source of supply, allows you a much better selected and more diversified stock. Prompt delivery from wholesaler enables dealer to keep his stocks clean and fresh. He can quickly replenish items in current demand, speedily add new lines and make seasonable adjustment with ease.

"Dealers' transportation, freight

(Continued on Page 11)

CANADIAN FORD SEEKS EXCHANGE AGREEMENT WITH BRITISH FORD

Detroit, April 28.—In an effort to expand foreign markets Wallace R. Campbell, president of the Ford Motor Company of Canada, Ltd., will sail for England May 21 to negotiate with the Ford Company of England on an agreement whereby the Canadian company would supply the new V-8 cars to territory now covered by the English company. In return Ford of England would supply the "baby Fords" to meet demands of the Canadian company for this type of car.

More than 3,000 men are now on the payroll of the Canadian company. May schedule calls for an output of 5,000 cars.

SAFETY CONTEST FOR FLEETS WILL CLOSE JUNE 30

Chicago, April 28.—The national fleet safety contest conducted by the National Safety Council of this city will end on June 30. A summary of the records of the fleets that are participating is being prepared by the council. Only a few of the participating fleets are reporting on an hourly basis. Most of the executives in charge have preferred to report accidents per 100,000 miles of travel.

The National Safety Council has announced that it is considering inaugurating another safety fleet contest at the close of the present one. The council would be glad to hear from fleet operators as to how they feel about another contest following this one. The executive committee of the council has the matter under advisement now.

FORD ORDERS FOR PARTS NOT LARGE AT CLEVELAND

Cleveland, April 28.—Ford Motor Company orders for parts have affected local partsmakers in only a slight degree. In fact, more impetus is expected to be supplied from a 60,000-unit Chevrolet program for May. The local sheet trade continues adversely affected by restricted operations at barrel-making plants, and the failure of metal furniture buying to pick up.

March Car-Truck Output Is Highest Since September

(Continued from Page 1)

amount to 17,526 cars, as compared to 29,360 for the corresponding period of 1931 and 39,042 for the first three months of 1930.

FACTORY SALES AUTOMOBILES MARCH, 1932, COMPARED WITH PRECEDING MONTHHS

United States

Year and Month	Total	Passenger Cars	Trucks	†Taxicabs
1930				
January	273,221	232,848	39,406	967
February	330,414	279,165	50,398	851
March	396,388	329,501	65,466	1,421
Total (3 months)	1,000,023	841,514	155,270	3,239
April	444,024	372,446	71,092	486
May	420,027	360,928	58,659	440
June	334,506	285,473	48,570	463
July	265,533	221,829	43,328	376
August	224,368	183,532	40,450	386
September	220,649	175,496	44,223	930
October	154,401	113,226	40,593	582
November	136,754	100,532	35,613	609
December	155,701	120,833	33,443	1,425
Total (year)	3,355,986	2,775,809	571,241	8,936
1931				
January	171,848	137,805	33,531	512
February	219,940	179,890	39,521	529
March	276,405	230,834	45,161	410
Total (3 months)	668,193	548,529	118,213	1,451
April	336,939	286,252	50,022	665
May	317,163	271,135	45,688	340
June	250,640	210,036	40,244	360
July	218,493	183,993	34,317	180
August	187,197	155,321	31,772	104
September	140,566	109,087	31,338	141
October	80,142	57,764	21,727	651
November	68,867	43,185	19,683	999
December	121,541	96,753	23,644	1,144
Total (year)	2,389,738	1,967,055	416,648	6,035
1932				
January	119,344	98,706	20,541	97
February	*117,418	94,085	*23,308	25
March	118,959	99,325	19,560	74
Total (3 months)	355,721	292,116	63,409	196

*Revised. †Includes only factory-built taxicabs and not private passenger cars converted into vehicles for hire.

GMC Truck Survey Reports Used in College Marketing, Transportation Courses

Reports of surveys conducted by the General Motors Truck Company, Pontiac, Mich., into the use of motor trucks by eighteen of the foremost lines of business are being used by leading colleges and universities throughout the country in their courses on marketing and highway transportation. Complete sets of these reports, containing detailed information on the operation of trucks by these businesses, have been placed in the libraries of these schools at their own request, while many professors are using the information contained in them in the preparation of their lecture courses.

Hundreds of requests for copies of this report have been received from schools and many of the foremost professors have written that they have found a vast amount of useful information in them for the instruction of their classes.

These surveys represent nearly two years of research into the use of trucks in the various vocations and constitute impartial, actual analyses. Trained investigators rode hundreds of miles on all kinds of trucks, studying the equipment, checking its efficiency, studying costs and photographing interesting variations in equipment. As the study was carried on over a large portion of the country, the reports provide a representative cross-section of truck operation.

The businesses represented in this investigation include: Food wholesaling, coal retailing, parcel delivery, retail food delivery, wholesale baking, oil and gasoline distribution, general wholesaling, contracting, building material delivery, moving and storage, laundry and cleaning, retail furniture delivery, bottling, wholesale meat distribution, dairy products distribution, commercial trucking, chain stores and public utilities.

Because the conclusions in these surveys are based on actual facts and figures and are representative of the everyday problems that confront the operator of motor trucks they have brought forth much favorable comment from leading educators all over the country.

"They seem to me to be so excellent both in method and material selected that I can highly recommend them for a study in market analysis," writes Hugh E. Agnew of New York University, secretary-treasurer of the National Association of Teachers of Marketing and Advertising.

Another letter received by the truck company is from Karl D. Reyer, associate professor in the College of Business Administration, University of Oklahoma, who writes: "I am going to place them on reserve in the commerce library and use them in connection with my courses in marketing." At the University of California all of the surveys are being used, a letter from Ewald T. Grether, associate professor of economics, stating: "We were particularly impressed by the manner of presentation and by the detailed information which has been made available. We feel that this type of material is helpful to university instructors in business for the following purposes: (1) Source material for their own lectures and problems; (2) library material for general student reference, (3) library material for specific research work."

Albert W. Frey, assistant dean of Dartmouth College's Amos Tuck School of Administration and Finance, says: "Having examined the first copy received, I am convinced that these surveys represent a very constructive contribution to the automotive industry, as well as to the literature of the business. Although we offer no course that is exclusively concerned with industrial transportation, I believe that the surveys can be used with excellent advantage in our course in industrial management and in marketing."

The United States Department of Commerce is also using these surveys in making an economic study of motor truck transportation throughout the United States, covering not only cost methods but the major trends in the industry. Copies have been sent by the main offices of the department in Washington to all of its district offices for their use in making their analyses.

Copies of any one of these survey reports, it is said, may be obtained at no cost by truck operators upon writing to the offices of the General Motors Truck Company, Pontiac, Mich.

PHILADELPHIA DAIRIES USING FLEET OF DODGE REFRIGERATED TRUCKS

A fleet of Dodge trucks, with new type light refrigerated bodies, so designed that through their use milk can be delivered to the consumer at the same temperature it comes from the dairy refrigeration room, has been placed in use in Philadelphia by Standard Dairies, Inc., distributors of Silver Seal dairy products.

Bodies were built to specifications in Philadelphia and delivery of the fleet of twelve trucks was made within nine days from the time the order was placed.

The heavily insulated bodies are finished in silver Duco. The interior compartment, which is accessible through rear and side doors, is refrigerated by means of ice bunkers and a temperature of from 36 to 40 degrees is maintained.

Milk is delivered in a new type sealed fibre container, used exclusively at the Silver Seal plant. The containers are packed in cartons and each truck loads a capacity of 2,500 quarts, about four times as much milk as could be carried in the same space in glass bottles. The Silver Seal plant is said to be the first dairy in the world to abolish the glass milk bottle, and the trucks were designed to meet the requirements of the new method of distribution.

Motor Production Activity

By RAY B. PRESCOTT
Marketing Counselor

Production activity the week of April 23 failed to make any gains over the previous week, just maintaining the same pace. It commences to look now as though the spring increase in sales was to fall somewhat short of the demand anticipated by the manufacturers. However, it is still too early to draw this as a final conclusion, as Ford has not reached his full production.

Based upon the weekly average of 1928 as 100, the index figured for the week of April 23 was 55, the same as the previous week, but nearly 30 per cent. behind the same week of a year ago, when it was 77.

TENNESSEE TO RIGIDLY ENFORCE REGULATIONS RULING TRUCK WEIGHT

Nashville, Tenn., April 28 (UTPS).—J. O. Davis, chief of the Tennessee State Higway Patrol, announced today that the new regulations promulgated by State Highway Commissioner R. H. Baker, governing weights and loads of motor vehicles on Tennessee highways, would be rigidly enforced, beginning immediately.

The new regulations provide maximum outside width, including load, of eight feet, with exception of farm tractors, which may have a maximum of nine feet. Maximum height, with or without load, twelve feet. Maximum length, 35 feet, and no combination of vehicles shall exceed a length of 45 feet.

No motor vehicle shall have attached thereto more than one other vehicle, and the total length of vehicle and trailer shall not exceed more than 45 feet.

Load weight, including truck or vehicle, shall not exceed more than 650 pounds per inch of tire surface, nor more than 18,000 pounds on one axle. Maximum gross weight of any four-wheeled vehicle shall not exceed 20,000 pounds.

Special men will be stationed at Nashville, Memphis, Chattanooga and Knoxville for specific purpose of keeping check and preventing violations of above rules and regulations.

SPARKS *from* DETROIT

Service vs. Services

* * *

Birthdays

* * *

Varley Young Returns

* * *

Chris Sinsabaugh—Detroit Editor

AROUND here they are chuckling over the comeback of a minister who had received a letter from the service department of the company selling the automobile he owned, pointing out that the books showed the pastor had not had his car in for overhaul or service for many months, and asking why.

The minister who received this letter was the Rev. Paul W. Gauss of the First Presbyterian Church of Bellefontaine, O., and his reply was received by Sparks & Hamilton, Chevrolet dealers, who, in turn, forwarded it to the General Motors Building, it was so good.

* * *

"WHILE YOUR RECORDS SHOW that my car has not been in your service department since August 3, 1931, our records here at the church show that you (referring to one of the partners) have not been in our service department for a considerably longer time than that," he wrote.

"Now there is a certain amount of spiritual lubrication that every one can give to himself, such as meditation, prayer and daily Bible reading. I have no doubt at all that you take care of these yourself, but in our service department there is something that a person cannot get by himself."

And the pastor winds up by hoping he will see "you and your partner and your wife and your partner's wife and your partner's sons and various members of your firm in our service department in the near future."

* * *

MAY 10 WOULD HAVE been Sam Miles' seventieth birthday. Birthdays were a hobby with the late manager of the N. A. C. C.'s annual shows, which recalls the little memorandum book Sam always had with him. In it he listed the birthdays of his friends, and he had many of them. Usually on one's natal days a cheerful reminder of the occasion came through the mails.

* * *

VARLEY YOUNG, hard-driving publicist for Advertisers, Inc., is back from a strenuous trip in a Plymouth, which took in Washington, D. C., and Savannah, Ga.—3,000 miles in four days' driving.

12 GROUP WINNERS IN TRUCK SAFETY CONTEST

Boston, Mass., April 28.—Three Worcester companies were among the twelve whose commercial vehicles were named today as group winners in the fourth state-wide commercial vehicle contest of the governor's street and highway safety committee, as the committee reported that the 12,641 vehicles in the contest turned in the best driving record of the year during March.

With exposure to accidents greatly increased by a sharp jump in the number of hours of operation during the month, as compared to the two previous months, accidents were held to a minimum, the committee reported. At the same time the percentage of both fleets as a whole and individual vehicles which went through the month without an accident, reached the highest point in the history of the current competition.

With 384 fleets comprising 12,641 vehicles competing in March, there were only 599 accidents reported, as compared to 781 accidents in February and 573 in January. While the number of accidents in March was more than in January, the hours of operation rose from 2,967,584 in January to 3,080,496 in March, leaving the accident rate for the month of March at 19.00, the same as in January, but markedly lower than the high figure of 27.00 reported in February.

PACKARD IN CANADA ADDS DEPARTMENTS

Windsor, Ontario, April 28.—The Packard Motor Car Company of Canada, Ltd., has added body-building and axle-building departments to the factory established at Windsor a few months ago.

STUDEBAKER CORP. ADDS 9 NEW TRUCK DEALERS

South Bend, Ind., April 28.—The following new dealers for Studebaker commercial cars are announced today by the Studebaker Corporation:

Clark & Rile, Bedford, Ind.; Packer Motor Company, Inc., Glendale, Cal.; El Dorado Motors, Inc., El Dorado, Ark..; Youngdahl Brothers Company, Brockway, Pa.; Pierce-Arrow Sales Corporation, Detroit, Mich.; Bullard & Lewis, Hallstead, Pa.; G. G. Wodrich, Concordia, Mo.; Moorehead's Garage, Ardmore, Okla., and Everett Motor Company, Everett, Pa.

HUDSON ENTERS TWO SPECIALS FOR RACE

Indianapolis, April 28.—Another factory entered a team of cars in the 500-mile race at the Indianapolis Motor Speedway, May 30, when Buddy Marr today named two Hudson Specials for the competition.

A Hupmobile entry already has been received. Others are expected.

It was a Marr Special, powered with a Hudson motor, which finished tenth last year, that inspired the factory to sponsor a team of cars in the race next month.

LUDLUM STEEL ACCOUNT GOES TO REMINGTON, INC.

New York, April 28.—The Ludlum Steel Company, Watervliet and Dunkirk, N. Y., has appointed Wm. B. Remington, Inc., Springfield, Mass., advertising agency, to direct its advertising account.

Retail Salesmen—This Is Your Page

This department is devoted to the interests of the retail sales division of the industry. Salesmen, this is your department. Automotive Daily News wants you to get something from this department that will help you in your work on the firing line. It wants you to pass on your own experiences, successes, failures to help your brother salesmen. Send in your story in the form of a letter, or even a postal card, and let us get it ready for publication. Your achievement or your mistake may help another salesman to make sales or avoid errors that cost you commissions.

Dealers read this page. Give us the benefit of your reactions on these problems that affect the work of your salesmen, the men on the firing line, the men who bring home the bacon or don't.

PRACTICAL APPLICATION OF THE FIVE BUYING MOTIVES

This is the second installment of a specific sales case in which every one of the five motives, as set forth in the La Salle Extension University salesmanship course, are contained. The details of how the sale was made continue:

At last, Carroll, who had been listening attentively, saw that no further remarks were forthcoming.

"Well, Owens," he said, "on the surface it looks as though you handled the Clarkes very well indeed. I know your methods fairly well, and I feel convinced that when you say you had them sold on the car, you really did have them sold on it against other makes.

"But there's one point on which I think you fell down badly. And it is just this: I believe you made those people want our car, but I don't think you made them want it right now! I believe that you did what we're all likely to do unless we watch ourselves—you saw their enthusiasm, and thus took it for granted that they were in the market for a new car.

"Of course, I can only guess at the problem, but as I see the flaw in your sale, it is just this: You didn't make either of them feel that they couldn't get along without this car for a single day longer! You sold them the advantages, all right, but you didn't sell them the advantages of owning the car so strongly that their desire for a new car became irresistible. I'm afraid that that's what we often do in our selling—we sell the car, but fail to sell the advantages of owning it—and owning it now."

"By George, I guess you've hit the nail on the head first crack. Come to think of it, Mr. Carroll, I don't believe I did do much of a job proving the reasons for immediate possession of a new car. Let me puzzle this out for an hour or so, and I believe I can fix up a plan to save the situation yet."

The sales meeting had been held on a Thursday morning. On Saturday morning, Owens drove up to the shop door of the Long & Carroll establishment in a Smith sedan. Carroll happened to be standing there.

"Clarke's?"

"Yes," grinned Owens, "or rather, it's ours now!"

"Well, that's certainly fine, Bob! Tell me how you worked it."

"Nothing to it, Mr. Carroll; that is, once I got your slant on the part of the deal which I'd overlooked. Last evening I went out to the Clarkes' in a brand new sedan. As I drove up, I saw an equally new sedan parked across the street—not our make, though. At first I was a little envous of that other salesman. But then it occurred to me that Lady Luck was smiling on me. And I saw a way in which I could use that car to help sell mine.

"When I rang the bell, Mrs. Clarke herself happened to come to the door, and while she was rather surprised to see me, she nevertheless smiled and invited me in. As she held the door, I took occasion to turn, nod casually toward the street, and remark that their neighbors across the way were getting a new car.

"'Why, that must belong to the Davidsons! From time to time, they've said something about a car, but I didn't know that they were going to buy one so soon.'

"Without moving away from the door, she turned and called over her shoulder, 'Come here, Jim, and see the new car the Davidsons have bought.' And Clarke came to the door to look, too. That was my chance! Both of them standing there, looking right past my demonstrator over toward the other sedan across the street. I let them both get a good look, and then I said:

"'When you get two cars like that lined up, I believe our car outstyles the other one every time, don't you?'

"They agreed, as I felt sure they would. And with that Mrs. Clarke led the way into the house, Clarke and I following.

"When we were all seated, I started the ball rolling this way:

"'Mr. Clarke, in just what shape is your present sedan?'

"'Oh, pretty fair. We were just saying the other night that if we got it repainted, and looked over a bit, we could probably get along with it for quite a while.'

"'What about tires?'

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HOW TO CONDUCT A DEMONSTRATION

In the Willys-Overland Starter, a house organ run for the benefit of the company's retail salesmen, there is an excellent outline of the best method to be used in conducting a demonstration.

Some of the points apply exclusively to Willys-Overland salesmen, but in the main the presentation is universal. The presentation lists ten points that the salesman should bear in mind in giving his prospect a demonstration, as follows:

1.—Preliminary

Wherever possible, start and end the demonstration at the showroom. We know it is not always possible to start from the showroom, but every effort should always be made to end the demonstration there. This gives opportunity for appraisal of prospect's old car while demonstration is being made and to have things all "set" to close the deal at its conclusion.

Be sure car to be demonstrated is spick and span, inside and outside—no ashes on floor, no grease marks on body, no mud on fenders, no finger marks or dust on windshield and windows.

See that car has plenty of gas, oil, water and that the tire pressure is correct.

Without entering car, open left hand front door, see that shifting lever is in neutral and that hand brake is on and start engine, thus giving it time to warm up. Say nothing now about the advantage of finger tip control unless prospect remarks about your ability to start car before entering.

While engine is warming up, emphasize exterior beauty—distinction in every detail—radiator, body, bumpers, etc.

As you enter car, call attention to interior—fittings, upholstery, coachwork, equipment and control of windshield. While engine is still idling, explain accessibility of all controls. Mention again that the car you are driving is a Willys-Overland Six Sedan (or the precise model you are to demonstrate). Explain also that you have mapped out a route which includes varied road conditions which the prospect will meet in everyday service.

2.—Comfort and Quietness

Start off slowly, smoothly and quietly. Take it easy. Don't race motor. Don't jerk. Mention smoothness of engine. Stress car's roominess due to wide tread and ample wheelbase.

Emphasize comfort—due to deep cushions—two-way shock eliminators—length of springs—spring shackles.

Quietness—due to sound-proofed body which is insulated against heat, cold and noise.

3.—Ease of Operation—Acceleration

Comment on ease of handling in traffic, ease of shifting, steering and turning and ease of parking—finger tip control—treadle-type accelerator.

Watch for chance to accelerate car to show rapid pick-up, particularly when the stop light changes to green.

4. Brakes—Safety

Don't ever apply the brakes so suddenly that you throw the prospect from his seat or frighten him—unless, of course, in emergency. If you do plan to make a quick stop, warn the prospect beforehand. And

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Holds Good Mechanics Secret of Fleet Maintenance

The American Ice Company, in the operation of its 1,487 trucks, divided among its various branches and subsidiaries in New York, Boston, Philadelphia, Baltimore and Washington, has developed an unusually economical system of maintenance.

The system has been so rapidly improved, under the direction of J. D. Bradley, that in New York, during a period when the number of motor vehicles in use doubled, the total cost of mechanical repairs actually decreased for the entire fleet.

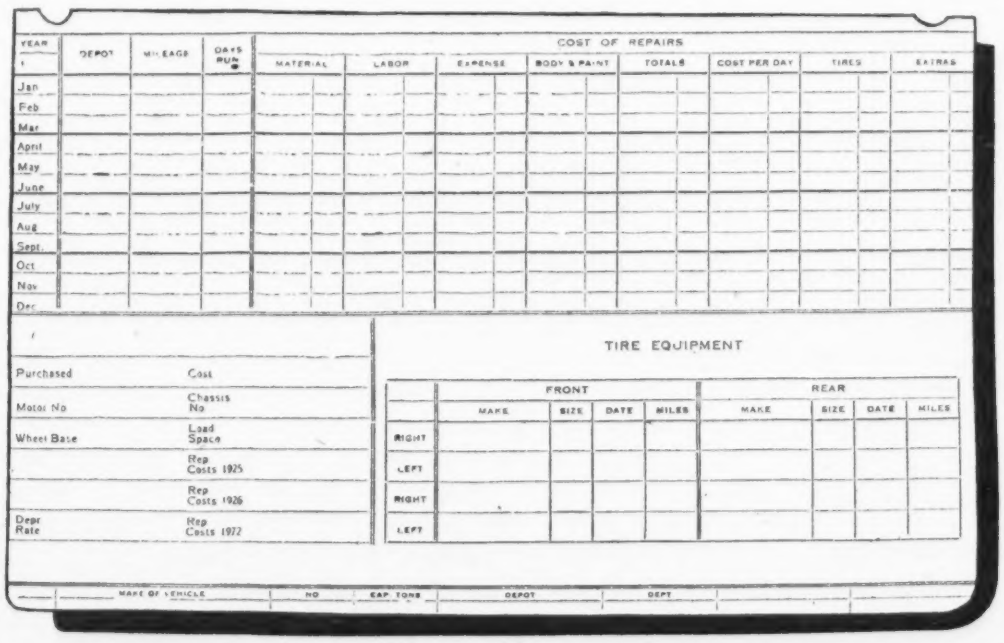
Mr. Bradley is a disciple of the school that believes there is nothing like a good set of mechanics to keep a fleet in order, and that the judgment and intelligence of a properly selected mechanic makes for more economy in fleet operation than elaborate schemes.

Of the American Ice fleet of 1,487 vehicles, 1,090 are Fords. The rest include Whites, Macks, Pierce-Arrows and 120 electrics. There are also 253 cars for salesmen and heads of departments.

Keen competition in the ice field has led to a close scrutiny of all costs. And in the truck maintenance end of the business Mr. Bradley has done his share toward economizing.

"We find it distinctly to our advantage from the point of view of costs," said Mr. Bradley, "to turn over a great deal of our work to organizations best equipped to handle it. Work we have done outside includes radiator repairs, magneto work, starter and generator work, oxy-acetylene and arc welding, cylinder grinding and brake shoe relining."

In New York one outside specializing organization is engaged to handle each of these types of work. Most of these organizations have more than one headquarters in New York, facilitating delivery.



"Of course, I can only guess at the problem, but as I see the flaw in your sale, it is just this: You didn't make either of them feel that they couldn't get along without this car for a single day longer! You sold them the advantages, all right, but you didn't sell them the advantages of owning the car so strongly that mileage," Mr. Bradley continued." At quite a few of our twenty-seven New York stations we have a mechanic. He handles rudimentary running repairs."

These branch station mechanics, Mr. Bradley explained, are given responsibilities similar to those of the general practitioner in medicine. They are not handicapped unduly by rules and regulations and systems. It is their duty to see to it that the vehicles are kept in shape. How they do it is, to a certain large extent, their own lookout and responsibility (although a very careful check on the effectiveness of their work is kept on cost blanks in New York, where, at the offices of the Knickerbocker Ice Company division of American Ice, Mr. Bradley has a compact card index giving the life history of cost of ailments on every one of the 1,487 trucks in five cities.

The mechanic, then, using his own judgment, and not relying on set traditions as to mileage or time a vehicle should run before certain repairs are necessary, makes his own decisions.

Like the general practitioner in medicine, he prescribes and sometimes operates, relying on instinct as much as on rule. Like the general practitioner, also, he determines by the patient's actual condition, and not by a set of charts and diagrams, whether the vehicle or some part of it should be sent to a specialist or expert of higher qualifications.

"Major repairs," said Mr. Bradley, "are made whenever a vehicle needs them. Just because a vehicle has gone 10,000 miles, however, we don't repair it if it doesn't require it.

"We have twenty-seven stations or depots in the New York area. At the head of each station we have a superintendent, responsible for sales and operation. The mechanic comes under this superintendent, and is there to save the expense of sending out service cars from the shop.

"In the New York area we have two shops, one at Willoughby Avenue, Brooklyn, and the other at Freeport, L. I. The heavy work is done at Willoughby Avenue. Fifteen mechanics are stationed there and four at Freeport. Systems worked out for our other companies (American Ice Company in Philadelphia, Baltimore and Washington; Boston Ice Company, Womter Hill Ice Company and Independent Ice Company in Boston) are similar.

"Of our 1,487 trucks, 633 are in New York, 294 in Boston, 275 in Philadelphia, 151 in Baltimore and 134 in Washington.

"We have few breakdowns. In our field we can't have them, because service is paramount.

"We pay no insurance, the company handling its own public liability and damage risks."

The Fords, which make up the bulk of the American Ice fleet, each carry fourteen cakes of 300 pounds each, making a total load of 4,200 pounds. The specially built body weighs 1,050 pounds, and gross weight of body load and chassis comes to 8,200 pounds.

The 1,090 Fords covered 6,492,336 miles in 1931. Only $79,422.50 was spent for mechanical repairs for the Fords. This figure covers all materials, labor and overhead, and comes to $.0122 per mile. In Philadelphia the Fords average 6.6 miles per gallon of gasoline; in New York, 6.5. Tires and tire repairs for all the Fords cost $33,049 during 1931, i. e., half a cent a mile.

The first Ford was bought in 1928. Many have been 50,000 miles and the company expects to get 75,000 out of a good proportion.

A body shop of its own is maintained by the company at Willoughby Avenue. There the company builds its own bodies and ships them to other cities as needed. Bodies are repainted every two or three years.

In New York, the 633 trucks of different makes traveled 3,672,451 miles;, cost $57,763.95 for mechanical repairs, $19,680 for tires, used 764,903 gallons of gasoline and 19,534 gallons of motor oil.

In Philadelphia, 275 vehicles traveled 1,788,042 miles, cost $23,151.31 for mechanical repairs, $11,957.77 for tires, used 339,485 gallons of gasoline and 9,368, gallons of oil.

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

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Trucks on Jacks

AT the present time there is developing—indeed, it is pretty well developed now—a market for parts and equipment replacements in the truck field which will be an important factor in sale before very long.

In certain fields which are large users of motor truck transportation business has been so slack for the past year or two that a large proportion of their truck units which are lying in storage in the garage are jacked up and out of commission. Typical of this condition is the building and construction industry in most sections of the country. A building concern which used to run a fleet of, say, 100 trucks, can now get along with twenty units in actual operation. The other eighty trucks are idle and "up on jacks."

In the desire to reduce operating costs just as far as possible, it has become a habit with many truck operators to take parts needed for repairs from the trucks which have been jacked up. In some instances this has gone so far that a company will have twenty, more or less, worn out trucks running around the streets and a fleet of sixty or more in the garage partly dismantled. Some of these idle trucks have probably lost carburetors, ignition systems, axle parts, bearings and what not.

With the return of a reasonable activity in the trades that have been reduced to such expedients there will be an immediate need for replacement parts and for new truck units. This is absolutely inevitable. The day is coming when these trucks on jacks have got to be taken down and made ready for service.

As we see the situation, this is the time for companies handling replacement parts for trucks to go after this potential business. There is business to be done with a lot of fleet owners whose transportation units have been laid up by the depression and must sooner or later be put back on the road.

General Motors Earnings

WITH the announcement of General Motors' earnings for the first quarter of 1932, with 17 cents per share as the figure, we get an accurate picture of the present situation in the automotive field. The comparison with the first quarter of last year is also enlightening. The earnings for that period amounted to 61 cents per share.

Obviously, the 17 cents earnings in the first quarter make the continuance of the $2 dividend rate a matter of speculation.

The fact that the General Motors' statement, of course, includes the earnings of Chevrolet, the manufacturer which has led in production so far this year, makes the general situation all the more discouraging.

However, there are some bright spots in the picture. It is extremely likely that the second quarter will show improvement in automotive sales. They can scarcely be worse. The actual delivery of the new Fords will help the situation for the two other large producers of low-priced cars. Chevrolet is understood to be stepping up its production schedule to 62,000 units for May. Sales of the Ford offerings will not only put some money in circulation, but will stimulate buying of other makes.

While there is every indication now that the year 1932 is to be the lowest in volume that the automotive industry ever has gone through, there is reason to hope that the usual course of production and sales will be altered, with the peak coming very much later in the year. In the meantime, it might be interesting to remember that with General Motors common stock selling at between $11 and $12 a share, the $2 dividend rate could be considerably cut and the security would still yield a very fair return on the investment.

COMING EVENTS

APRIL

23-May 2—**Zagreb, Jugo-Slavia,** Automobile Salon.
27-29—**New York city.** American Welding Society.

MAY

1- 8—**Penzan, Poland.** International Fair.
2- 6—**Philadelphia, Pa.** American Society of Mechanical Engineers management division meeting.
4- 6—**Honolulu, Hawaii.** National Foreign Trade Council.
4- 7—**Dublin, Ireland.** Commercial Car Show.
7-11—**Cleveland, O.** American Society for Testing Materials, meeting.
7-16—**Budapest, Hungary.** International Fair.
12-13—**Cleveland, O.** American Gear Manufacturers' Association, meeting.
14-15—**Atlantic City, N. J.** Annual convention New Jersey Automotive Trade Association. Hotel Jefferson.
16-20—**San Francisco, Cal.** United States Chamber of Commerce, annual meeting.
19-20—**Chicago, Ill.** National Battery Manufacturers Association meeting, Hotel Sherman.
23-28—**Chicago, Ill.** Radio Manufacturers Association, meeting, Hotel Sherman.

JUNE

Bordeaux, France. Automobile Show.
Cork, Ireland, Commercial Car Show.
Paris, France.—International Automobile Manufacturers Association sixth annual Motor Transport Congress.
1- 3—**Tulsa, Okla.** American Petroleum Institute, mid-year meeting, Mayo Hotel.
8-11—**State College, Pa.** American Society of Mechanical Engineers, National Oil and Gas Meeting.
12-17—**White Sulphur Springs, W. Va.** Society of Automotive Engineers, summer meeting.
20-24—**Atlantic City, N. J.** American Society for Testing Materials, annual meeting, Chalfonte-Haddon Hall.

JULY

3—**France.** Grand Prix Automobile Race.
5- 9—**Southampton, England.** Commercial Car Show.
9-10—**Belgium.** Grand Prix Automobile Race.
17—**Germany.** Grand Prix Automobile Race.
20-22—**Llandrindod, Wales.** Commercial Car Show.

OCTOBER

3- 7—**Washington, D. C.** National Safety Council, meeting.
3- 7—**Buffalo, N. Y.** National Metal Exposition, 174th Regiment Armory, W. H. Eisenman, 7016 Euclid Ave., Cleveland, director.
3- 7—**Buffalo, N. Y.** National Metal Congress. Sponsored by American Society for Steel Treating, with cooperation of American Society of Mechanical Engineers, Institute of Metals and Iron and Steel Divisions of American Institute of Mining and Metallurgical Engineers, American Welding Society, Wire Association.
13-22—**London, England.** Olympia Show.

N. J. WOULD LEGALIZE CAR SIGNAL DEVICES

Trenton, N. J., April 28.—Senator Ely of Bergen piloted through the Senate yesterday afternoon the bill of Assemblyman Doughty of Ridgewood for the installation of signaling devices on automobiles for turning corners. Senator Ely explained that the measures had been urged by public safety councils and had been approved by many public officials as a means of helping to avoid accidents. The vote for the bill in the Senate was unanimous.

A. V. REYNDERS HONORED

Springfield, Mass., April 28.—Arthur V. Reynders, works manager of the East Springfield plant of the Westinghouse Electric and Manufacturing Company, was elected president of the Springfield Chamber of Commerce by the board of directors at their annual meeting in the chamber rooms.

BUTLER MOTORS OPENS NEW CHICAGO BRANCH

Chicago, April 28.—Earl Butler, president of Butler Motors, Inc., Hudson-Essex distributor for the Chicago area, has announced the opening of a new retail branch at Irving Park Boulevard and Lincoln Avenue. W. G. Adair has been appointed as manager at this location.

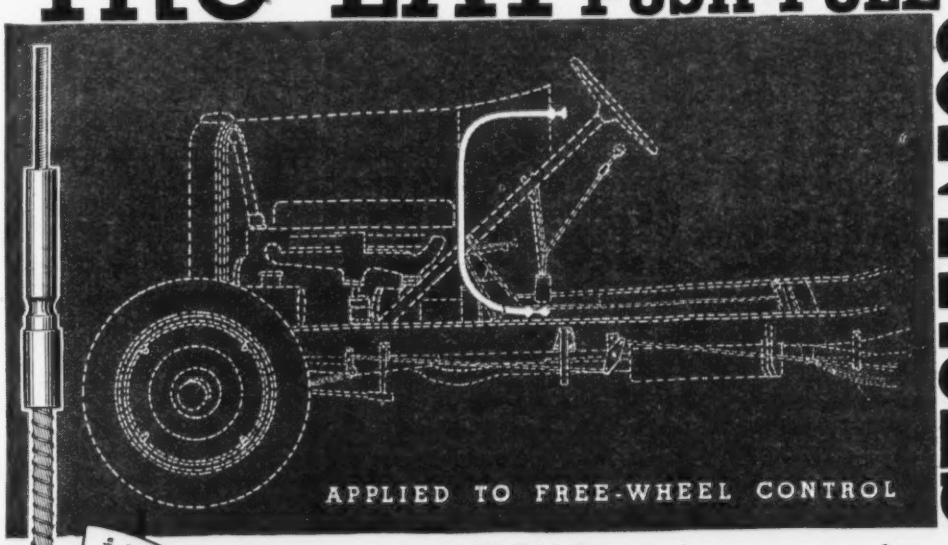
Them Is Our Sentiments

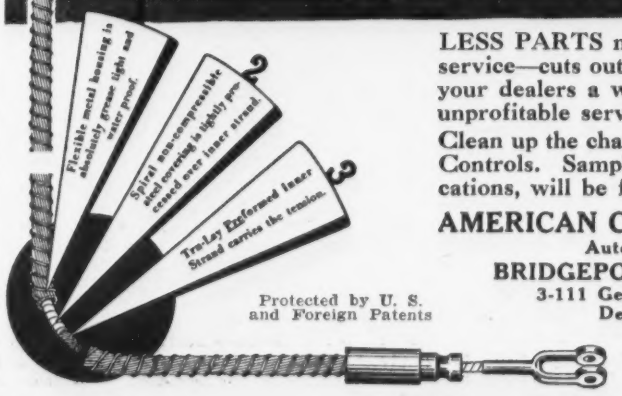
HARD-BOILED CITY ED IS HUMAN, AFTER ALL

Specially drawn for EDITOR & PUBLISHER *by Claude Shafer, Cincinnati Times-Star*

THE ABOVE CARTOON is published through the courtesy of the editor and publisher of the Fourth Estate, and appeared in the April 23 issue of that publication. Automotive Daily News is indebted to that paper for permission to reprint

TRU·LAY PUSH·PULL CONTROLS




Flexible metal housing is absolutely grease tight and water proof.
Spiral non-compressible steel covering is tightly pre-stressed over inner strand.
Tru-Lay Enformed inner strand carries the tension.
Protected by U. S. and Foreign Patents

LESS PARTS make better cars—cuts down service—cuts out annoying rattles—and saves your dealers a whale of a lot of picayunish, unprofitable service.

Clean up the chassis with Tru-Lay Push-Pull Controls. Samples for test, to your specifications, will be furnished on request.

AMERICAN CABLE COMPANY, Inc.
Automotive Division
BRIDGEPORT, CONNECTICUT
3-111 General Motors Building
Detroit, Michigan

An Associate Company of the American Chain Company, Incorporated

ACCO

Production--Engineering--Factory

THE AUTOMOTIVE DIESEL ENGINE

By MYRON S. HUCKLE,
Instructor Aeronautical Department
Massachusetts Institute of Technology

Under the title of automotive Diesel engine must come all high-speed types. This group may be more easily classified as the one which embraces engines of relatively low weight per horsepower. Only the engines of high power-weight ratio can be advantageously mounted in vehicles.

Any development of the pure automotive type reacts upon the design of the heavier low speed type and the dividing line must be constantly shifted to include greater and greater power outputs. The engines of the new German pocket battleship may be included in the automotive type, for they embody the fundamental requirement of that group, i. e., low weight per horsepower. If any one should doubt the leadership of German Diesel engines let him stop and consider and compare with contemporary Diesel installations the remarkable low weight of those battleship engines of seventeen pounds per horsepower.

The automotive group must at present include the aircraft, truck, bus, light marine, locomotive and numerous portable power plants for installations such as shovels, drag lines, air compressors, logging engines, farm machinery, pumps, etc.

The Oil and Gas Power Report in Mechanical Engineering for December, 1931, may be quoted:

"The Progress Report for the year 1927 contained the statement that '1927 has marked the beginning of what may prove to be a long struggle for higher speeds. The present trend is unmistakably toward higher speed in order to obtain more power per pound of engine weight.' The prophetic quality of this statement is attested by the fact that in the past year, in practically every field of application of the oil engine, there has been a marked stepping up of rotative speed, and there have been new applications that are made possible only by this high speed."

The many advantages of the Diesel cycle have been enumerated again and again. An article in the Technology Engineering News of February, 1930, entitled "The Advantages of the High Speed Diesel Engine," brings together the most important ones.

The disadvantages, so-called, are a result principally of the lack of development. The troubles in the gasoline carburetor engine during its infancy loomed large in comparison with those of the steam engine.

The automotive Diesel is not nearly as great a jump from the gasoline engine as that engine was from the steam engine. In addition, the increased knowledge of metallurgy, the expert technique and the well-equipped research laboratories make the development of the high-speed Diesel a problem of comparative simplicity.

Probably the greatest problem is the ignorance, superstition and fear which are exhibited by prospective users of these engines. They agree that there are many advantages, but they also insist that there are many disadvantages. It must be generally agreed that the Diesel would be more universally adopted if the disadvantages were sufficiently reduced in number and degree.

Arthur Nutt of the Curtiss Company, at the Cleveland S. A. E. meeting, mentioned a number of the disadvantages of the Diesel for aircraft use as they appear to him.

He said: "A cup of hot oil will ignite and burn more severely than a cupful of gasoline."

The difficulty with this statement is that the gasoline is not found in a cup, but usually spurting from a broken pipe or spread over the whole airplane and its surroundings. If Diesel fuel is ignited, the flame spreads at a low rate. In crash fire tests at M. I. T. (see Aviation for November, 1930) it was found that five seconds after ignition, gasoline provided a complete conflagration, while, after sixty seconds, the flame from Diesel oil was practically invisible and confined to a few square inches of oil-covered fabric and wood. Besides this advantage, Diesel fuel will not evaporate and fill empty tanks, compartments and wings with an explosive mixture ready to be ignited by a spark.

He said, further: "The modern aircraft engine develops its rated power at normal speeds of 2,450 revolutions per minute."

There is no longer the speed limitation to a correctly designed Diesel engine. They have been operated at 4,000 r. p. m. Only the dynamic problems persist, and the reciprocating weights are but little heavier than those in the Otto cycle engine.

Again, he stated: "Consumption of between .40 and .425 pounds per b. h. p. hr. may be expected under these conditions (7:5 8:1 C. R.) from average-production engines."

They never obtain these values in commercial operation, for fear of burning up the air-cooled engines, and in both air and liquid cooled engines the increased cost of fuel to operate at these compression ratios overcomes any gain in fuel saving. The Diesel runs continuously and unfailingly at fuel consumption far below these figures. The most convincing argument must be the world's endurance record flight by Lee and Brossy, in which an engine with only a 225 h. p. rating took off with two men and enough fuel for the record-breaking flight of over seventy-eight hours.

He questions, "What is the effect of cold air and low air pressure at high altitudes?"

In flight tests at Wright Field a Packard Diesel was alternated with a Wright J-5 in a Consolidated training airplane and flight performance obtained. The Packard gave approximately 3,000 feet greater ceiling and an increase in

(Continuued on Page 8)

High Speed Cylinder Reborer and Grinder

A high speed cylinder reboring and grinding machine has just been announced by the Simplicity Manufacturing Company of Port Washington, Wis. The new machine is a precision cylinder reborer and grinder, designed to assure accurately true cylinder walls at right angles to the crankshaft and producing the highly polished finish to cylinder walls vitally necessary for modern high speed engines.

It is claimed that the new machine—because of straight line construction and limited cowl clearance—will service most motors in the chassis, including the Model A Fords and Chevrolet sixes. A range of cylinders from 2¼ inches to 4¼ inches, to a depth of 10½ inches. The machine weighs 150 pounds and may be handled without the use of overhead hoist.

The manufacturers state that the name, "Lightning," has been chosen for the new machine because of its high speed characteristics, boring at 2½ inches per minute, or over three times as fast as the previous model Simplicity cylinder reborer and grinder. Grinding is likewise high speed, 50 per cent. faster than the previous Simplicity model. It is powered by a heavy duty one-half horse power repulsion induction motor.

In order to withstand high speeds, and to eliminate all dangers of chatter or vibration, unusual care has been exercised in the rigid construction of the machine. Other important features include ball bearing construction throughout, and hardened steel and micarta helical gears, for long life and quiet operation. The boring bar, around which the accuracy of the machine centers, is made of four times heat treated and normalized steel to assure permanent accuracy, finish ground to one ten-thousandths accuracy for roundness and straightness.

REVERSING TAPPING MACHINE

The Hydro-Machine and Tool Company, Bridgeport, Conn., has developed a new reversing type of tapping machine, which embodies no clutches or gears to reverse the spindles for performing the threading operation and backing out of the tap.

The spindles are positively driven in either direction by means of a hydraulic piston, connected with a rack meshing in a train of gears, the piston being double-acting. The travel of the piston may be adjusted for any number of revolutions to the tapping spindle in either direction within the capacity of the piston, which has a standard of fifteen revolutions of the tap, but this may be increased if desired.

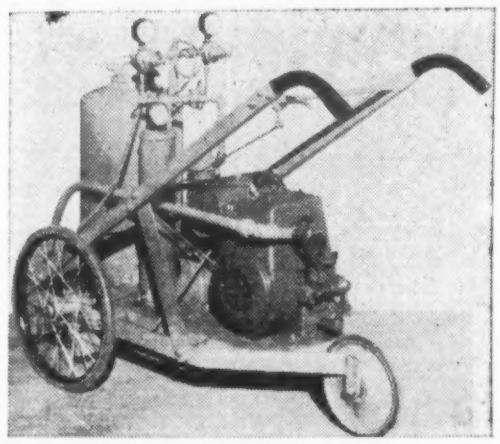
The tapping head is mounted on V gibs and an overhead pillar support. It has a wide range of adjustment. Spindles are made of hardened and ground tool steel and are carried on ball bearings. The positively driven spindles are so arranged with a compensating head that the tap follows its own lead, permitting the use of different sized taps in the same machine. Twelve spindles is the maximum on the standard machine. All gears are of the helical type with wide face. The motor and pump are mounted within the base. The indexing and locking devices are operated hydraulically and are controlled from the main drive. The table is adjusted by means of a handwheel. Speeds are controlled from a dial, the range being from one to fifty cycles per minute. The capacity is eight $\frac{7}{8}$-inch taps in ¼-inch steel. From twenty to eighty pieces per minute can be produced by hand feed and this can be increased by using a hopper feed.

The floor space required by the machine is 42 by 57 inches and the weight is roughly one ton. Drilling, milling, spinning, screwsticker and light forming attachments may be had if desired.

SNAP-PON SPLASH GUARD

The Signal Manufacturing Company, Lynn, Mass., is marketing the Lion molded rubber splash guard, designed to stop mud and oil from splashing over the car. This guard is attached to the fender by a patented metal back support, which shapes itself tight to the fender and prevents sagging. The guard snaps on in place without the use of tools.

Sprayer for Marking Roads



The Simons Paint Spray Brush Company, Dayton, O., has just placed on the market a machine designed for marking zone lines on highways and in similar positions. The custom of putting white lines on the road to indicate to traffic, which is its side of the road, and where it should go, has become an important part of highway building. This marker is designed to carry out the work efficiently.

This machine sprays the paint to form a line which may vary from 3½ to 6 inches in width in half-inch graduations. It is stated that the quantity of paint consumed is low, although the air pressure forces the paint into all cracks and crevices. Another device on the machine clears all cracks of dust and dirt just before the painting operation. The cost of producing a line is said to be about .005 of a cent per linear foot.

The machine is a complete power plant, carrying an air cooled gasoline engine belted to the air compressor. The air reservoir carries the necessary pop valve to regulate the pressure for efficient operation of the spraying device. The weight of the machine is nearly 500 pounds. The wire-spoked wheels are eighteen inches in diameter, rubber tired, and carried on ball bearings.

SPIRAL OILLESS BEARINGS

E. A. Williams & Son, Jersey City, N. J., have designed for sliding or oscillating motion with the axis, either vertical or horizontal, a spiral type oilless bearing. These bearings, it is stated, will operate at speeds up to 2,500 r. p. m., depending on the load and at temperatures as high as 400 degrees Fahrenheit.

The grooves in the bearing are machined with an undercut to insure the graphite's staying in them. They are arranged to give a complete luberication with the sacrifice of a minimum of bearing space. The clearances used in the bearings varies from 0.001 to 0.002 of an inch greater than for plain bearings.

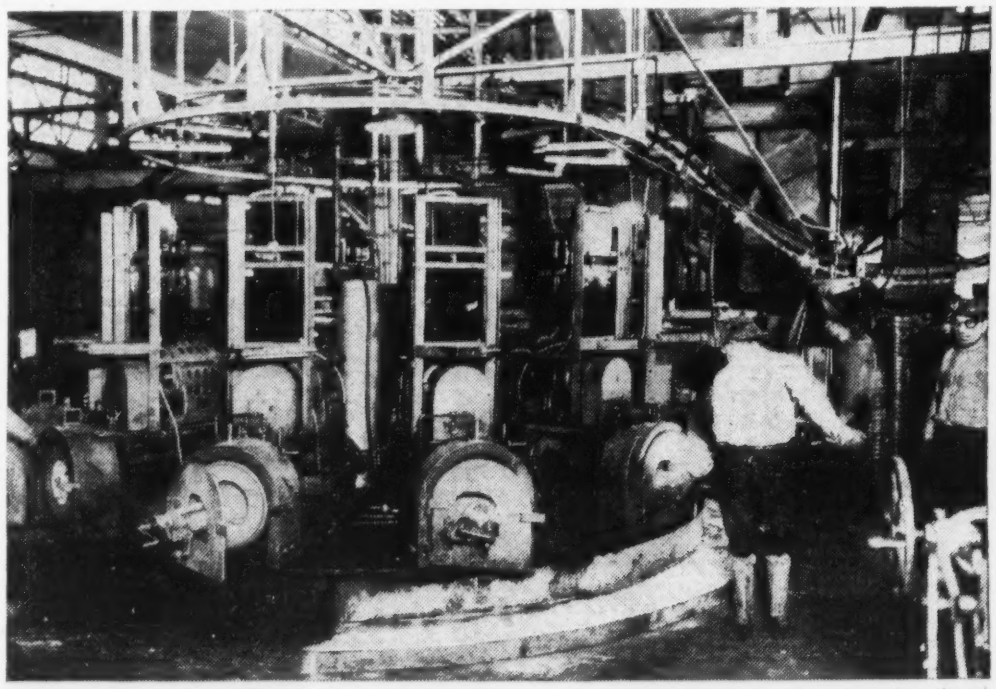
KEY CUTTING MACHINE

The F. W. Stewart Manufacturing Company, Chicago, Ill., has developed the Circle Ess key machine, which may be operated by hand, or the hand wheel is grooved to permit operation with motor and belt. Keys are cut by a heat-treated rotary file, keyed to the drive shaft. Oversize bearings, it is stated, are fitted to insure smooth operation. The bracket for holding the key blank and code key is equipped with a handle. A box containing an assortment of 144 key blanks is furnished with the machine.

NEW FAN BELT

The Thermoid Rubber Company is putting out a new fan belt, each belt being packed in a plainly marked box. This company also has a fan belt, built in two sizes, one with a capacity of fifty belts and the other with a capacity of 100 belts. These cabinets are designed so that they may be fitted one on top of another in a sectional bookcase idea. The new Thermoid belts will be distributed through jobbers.

Unique Process in Brake Drum Making



MOST INTERESTING in the making of Centrifuse brake drums is the unique process by which iron braking surfaces are spun, in the form of molten metal, into steel foundation rings by centrifugal force. This centrifugal "casting" is done with the aid of intricate machinery that had to be specially developed for the purpose. It is from this involved—and incidentally expensive—centrifugal casting operation that the Centrifuse brake drum derives its trade name

How to Conduct a Demonstration

(Continued from Page 3)

don't jam brakes, use "pumping" action.

Stress Willys-Overland's powerful braking action—kind of brakes, size, etc.

Point out other safety factors—double drop frame (low center of gravity), sturdy construction throughout, stout bodies, steel core steering wheel, rubber pedal pads, clear vision.

Also— safety investment, theft-proof ignition lock, operated with same key that locks door.

5.—Rough Roads

Don't grip wheel tightly. Watch the road ahead. Don't drop both front wheels into hole or strike bump with both front wheels at once. One wheel at a time is more comfortable.

6.—Power and Hill Climbing

Know your hill. Know exactly what your car will do on that hill. And know precisely, from practice, how to make the most impressive hill-climb.

7.—Performance

Willys-Overland cars have plenty of speed but never demonstrate unless the prospect requests it. And even then show him only what he wants and then slow down again. Most prospects are nervous when some one else is driving—particularly if the driver is taking what may seem to be the slightest chances.

Emphasize, of course, that Willys-Overland holds sixteen AAA performance records, and if this interests the prospect, tell him about the many other records Willys-Overland has established. Tell him that there has been so much exaggeration in automobile advertising, so many unsupported claims for performance, that Willys-Overland decided to take the guesswork out of it and provided its salesmen with the facts by establishing these important records. Explain that the AAA is the highest motoring authority and that these records were made under the most rigid supervision.

Mention extreme economy, describe phenomenal run made by Willys-Overland six on Indianapolis Speedway—50,039 miles in forty-eight days—at expense of only 1¼ cents per mile.

8.—Free Wheeling

If your demonstrator is equipped with free wheeling, explain this feature fully, of course.

9.—Prospect Takes Wheel

Apply the parking brake, mentioning that it operates on all four wheels, and invite prospect to take wheel.

Familiarize him with gear positions and tell him to handle car as if it were his own.

10.—To the Showroom—For the Order

By this time you will know the features that most impressed the prospect. On the way back to the showroom, bring these up again and stress Willys-Overland's advantages. Some one has said that selling consists of "telling the prospect you are going to tell him, telling him and then telling him that you told him." So bear down here on the points that appealed to him most.

By the time you arrive at the showroom, your prospect is going to want that car more than at any other time—provided, of course, you have handled the demonstration properly. This, therefore, is the time to try—and try hard—for the order.

His car has been appraised and he knows what the new car will do. If any one else has anything to say about the choice of the car, right now is therefore the time to get his or her acceptance, too.

Make every demonstration with the thought that you are going to make it result in an immediate sale.

WISCONSIN AXLES

Quiet, staunch in the steady performance of their job; to haul, to stay out of the repair shop, to perform at lowest possible cost.

WISCONSIN AXLE CO.
Oshkosh Wisconsin

HOFFMAN OPPOSES PLAN TO ABOLISH NEW JERSEY TRAFFIC COMMISSION

Trenton, N. J., April 28.—Opposition to Gov. Moore's proposal to abolish the New Jersey traffic commission as "useless" was voiced by Motor Vehicle Commissioner Harold G. Hoffman in the annual report of the motor vehicle department to the Legislature.

No appropriation is provided for the traffic commission in the appropriation bill and unless some provision is made, it will pass out of existence July 1.

"Throughout the country, in motor vehicle administrative circles it is quite generally agreed that improvement in the situation can be brought about only through effective and vigorous prosecution of a trilogy of attack engineering, enforcement and education" said Hoffman.

"It is hard to see how such a campaign can be effectively waged without the compilation of automobile accident statistics. You cannot hope to reduce accidents unless you have information as to when, where and why they are occuring."

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

"BUY A NEW CAR" CAMPAIGN JOINED BY ETHYL CORP.

(Continued from Page 1)

by numerous automobile manufacturers. Perhaps the most striking example of it, he declared, was seen in the models of eighteen passenger car makers that have high compression engines which can use only anti-knock gasoline.

"These engines were not the result of any undue influence exercised upon the automobile makers," Mr. Taylor emphasized. "Instead, they represent the solution, by cooperation, of the automobile maker's problem of producing a faster, more powerful car without increasing the size and weight of the engine.

"The public seemed to want more power and speed, but the automobile body designers said engine room and hood space could not be increased without making sacrifices in appearance and style. It was then that high compression and anti-knock fuels were adopted as the solution of the difficulty."

The "Buy a New Car" slogan recently has been indorsed by President Hoover and industrial and business leaders of the country as a means of stimulating business generally. The automobile industry was chosen for the campaign because it is the world's largest manufacturing industry, and consequently consumes a greater variety and quantity of raw materials and manufactured products than any other large undertaking.

The Ethyl Gasoline Corporation is owned jointly by General Motors Corporation and Standard Oil Company of New Jersey.

Cumulative New Commercial Car Registration Statistics, March, 1932

Returns for today: Arizona, California, Iowa, Kentucky, Maine, Louisiana, Massachusetts, Nevada, New Jersey, New Mexico, Tennessee and Texas

Figures in this table are from R. L. Polk & Co. of Detroit, with the exception of Illinois, which are supplied by the Robinson Advertising Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Metropolitan district figures compiled by Sherlock & Arnold are included in New York state total. Readers desiring county, city or town lists, or lists of owners in any given section, may obtain these by addressing any of these three companies. Some of this data has been published previously, but it is given here complete for the convenience of our subscribers. Commercial car figures do not include busses. In this table, 42 states and the District of Columbia. **Comparative figures for March, 1931, will be found on Page 7**

States	Autocar	Brockway	Chevrolet	Diamond-T	Dodge	Federal	Ford	G. M. C.	Indiana	International	La France Republic	Mack	Pierce-Arrow	Reo	Sterling	Stewart	Studebaker	White	Willys-Overland	Miscellaneous	Totals	States
Alabama			89		8	1	32	5		15							3		1		154	Alabama
Arizona			30		3		13			5										1	52	Arizona
Arkansas			44		1		29	1		8		1									84	Arkansas
California	6		311	2	46	2	368	31		47	6	1		40	2		12	9		83	966	California
Connecticut	3		100	3	14	6	49	9		26	1	4	1	12			4	3	3	2	240	Connecticut
Delaware		1	24		1		17	3		8				2							56	Delaware
Florida			92		5	1	124	4	1	21	1	1		3			2	1	1	3	260	Florida
Idaho			26				10			5											41	Idaho
Illinois	1		308	24	39	1	177	35		118	1	3		19	1	1	14	2	9	27	780	Illinois
Indiana	1		191		16	1	177	27	5	60	4			5		4	20	1	9	3	524	Indiana
Iowa			194	4	10		121			53		3		7			8	2	6	12	420	Iowa
Kentucky			51		5		48	3	3	25		2		3		1	2		2	2	147	Kentucky
Louisiana			49	1	5		38	3		20		1		1			1	1			120	Louisiana
Maine			88		12		32	7		16				4	1		2				162	Maine
Maryland	3	3	125		19	6	42	7		27	1	6		5			3	2		7	256	Maryland
Mass'setts	11	3	216	3	36	13	211	43		51		12		18	2	10	8	19	1	5	662	Mass'setts
Michigan			208	6	60	10	180	18	1	29				18			17	1	6	16	570	Michigan
Minnesota			228	7	40	5	152	11		81		6		14	1		12	7	6	1	571	Minnesota
Missouri	3		616	22	50	7	376	37	7	150		5		24	8	1	17	4	10	15	1352	Missouri
Montana			61		11	2	81	2	1	29				9			1	1	2	1	201	Montana
Nebraska			87	3	6		67	7		30				2			3		5	2	212	Nebraska
Nevada			18		1	1	4	2		3										1	30	Nevada
New Hamp.			44	6	6	1	20	4		7	1	1		2		3	2		1	1	99	New Hamp.
New Jersey	9	6	260	33	38	4	119	22		44	1	9	1	17	2	6	5	14	2	30	622	New Jersey
New Mexico			15		1		17	2		3											38	New Mexico
No. Carolina			171	2	8		87	4		11	1	1		2				9		25	321	No. Carolina
North Dakota			25		4		7	1		18				2					2		59	Nor. Dakota
Ohio	1		225	2	48	2	195	28	1	50	1	4		14		6	6	9	7	45	644	Ohio
Oklahoma			72		5		65	2		14				1						2	161	Oklahoma
Oregon			59		6		62	8		9					3			2		1	150	Oregon
Pennsylvania	14	10	508	13	90	5	415	43		151	6	27		49	8	19	18	15	26	36	1453	Pennsylvania
Rhode Island		1	40	1	2	4	26	4		9		2	1	6			1	1	1	2	101	Rhode Island
So. Carolina			47		8		27	1		2								1		1	87	S. Carolina
South Dakota			33	2	4		9	17		17		1					3		4		90	S. Dakota
Tennessee			60		6	3	27	3	1	17				1				1	3	1	123	Tennessee
Texas			296	1	16		204	10	1	56		1		6			3	5		10	609	Texas
Utah			51		4		22	4		11		2					1				95	Utah
Vermont			38	3	2		18	2		13				2					3	1	82	Vermont
Virginia	5		183		12	1	100	7		12	1			6			3			4	334	Virginia
Washington			60	3	12	1	83	8		18		1		1			5	5		14	211	Washington
West Virginia	1		75		8	1	32	5		13	2						4		2	4	147	W. Virginia
Wisconsin			230	10	20	1	135	9		46	1	1		8	3	2	11	1	7	8	493	Wisconsin
Dist. of Col.	2		62	3	5	1	38	9		38										11	169	Dist. of Col.
Totals	60	24	5710	194	693	80	4056	448	21	1386	28	95	3	303	31	53	191	116	119	377	13948	Totals

PROPER RECORDS ESSENTIAL TO TRUCK FLEET OPERATION

Proper records are essential in the operation of a truck fleet, in the opinion of John H. Jacobs, president of the Allied Freight Distributors, Inc. Discussing this phase of motor freight hauling, he says:

"No business is any better than its records. By means of them the executive directs business activities. In the business of transporting commodities this rule is infallible. A shipment of merchandise represents a definite amount of money to a shipper. He has a definite sum tied up in the goods or wares represented by the shipment. After it leaves his establishment his only accounting for the goods is a record. It becomes mandatory, then, upon motor freight operating concerns that they employ a system of records for control that will at all times show the location of responsibility for goods.

"Along with this requirement they must so design the system of records as to be able to issue a true invoice to the shipper for services performed, in the case of common or contact carriers, and be able to refer back from the invoice to specific shipments. This invoice must also be a matter of permanent record in the office of the transport concern."

Fundamentally, motor freight hauling in New York city and its metropolitan environs is the same as that in other parts of the United States. Practically, however, it assumes a different aspect because of the concentration of population in the area surrounding the metropolis.

"In this territory it becomes more a problem of distribution than distant hauling," says Mr. Jacobs. "As a result, the records must be designed from that point of view. The rate structure in the case of the common and contact carriers is builded from a consideration of the unbalanced operating conditions, as well as that of other intangible cost factors, as depreciation, obsolescence and interest on the investment.

"The theory, however, back of motor freight operations—i. e., store-door delivery, no crating, pick up at shipper's dock, overnight service, buying service, lower rates, etc.—operates the same in New York city areas as in other parts of the country. Because more frequent stops are required for picking up or delivering goods, the service tends to become more a problem of distribution than of distance or single-load hauling."

Allied Freight Distributors, Inc., is one of the largest truck operators in the metropolitan district. It is a consolidation of the Eagle Motor Haulage Company, Inc., Dispatch Forwarding Company, Inc., and Buchmuller Motor Transportation, Inc.

The incorporation of Allied Freight Distributors, Inc., in 1929 marked the first step of the founders toward the realization of a plan to operate an interurban and interstate transportation company under one head and along the same lines as those which govern other successful business enterprises.

The result is a concentration of working capital, elimination of duplication or effort, increased efficiency of personnel and mechanical equipment, elimination of unused freight depots and decreased overhead.

This corporation recognizes that one of the earmarks of successful enterprise is responsibility, and to that end they carry heavy liability insurance on the shipper's goods as well as public liability for protection of both the public and the corporation because of the operation of their trucks. At present the company owns more than fifty trucks which operate to 250 communities. They are mostly Macks, Internationals, Pierce-Arrows, which total about 250 tons estimated capacity.

The terminals are located in New York, Philadelphia, Brooklyn, Rockville Center, L. I., Secaucus, N. J.

Shippers are provided with pads of bills of lading which are called by the corporation non-negotiable receipts. When the goods go into the shippers' scales, the checker writes up the shipment on the form, which is made up in triplicate. The original and triplicate are removed by the shipper's checker and turned over to the motor freight truck driver, leaving the pink sheet in the book as the shipper's record.

On the back of the bills of lading are the terms of the contract to which the shipper agrees when he turns over his goods to the responsibility of the Allied Freight Distributors, Inc. These are the usual type of terms and the conditions governing acceptance of freight for shipment. They quite definitely classify the liability of the transportation company under variable conditions.

The bills of lading constitute the office record and follow the shipment to its destination. The consignee acknowledges receipt of the goods by signing the original "non-negotiable receipt," and keeps the duplicate as his record of the transaction.

It will be noted that each step in the transaction from shipper to consignee is covered by signature whether men change on the trucks or not. The original receipt is then turned into the office of the Allied Freight Distributors, Inc., as their record of the shipment.

In each of the depot offices there is a consecutively numbered triplicate record, called the "manifest." The non-negotiable receipts—i. e., the way bills—are stamped with the number of the manifest on which they were entered. Each manifest represents the load of one particular truck. Whenever a truck leaves a collecting depot with a reload, the driver always takes with him the way bills and a copy of the manifest for the distributing depot.

For example: A consignment which has been collected in the Brooklyn depot for distribution out of the Long Island depot is loaded on to trucks operating only between the depots. Upon arrival at the Long Island depot the Brooklyn trucks would be unloaded and the loads reloaded on other trucks operating in specified areas of Long Island.

In this case the way bills, or non-negotiable receipts, are forwarded from the Brooklyn depot along with the manifest, for each truck to the Long Island depot. The Brooklyn depot would retain a copy of the manifest, the Long Island depot would have a copy and a copy would be mailed to the main office.

After the way bills are signed by the consignee they are returned to the distributing depot, checked back against the manifest and then mailed to the main office, where they are again checked against the office copy of the manifest.

In the case of shipments destined for distribution out of the same depot through which they were collected, two copies of the manifest go to the main office and one remains in the branch office or depot.

Freight distributing trucks, after completion of distribution, are theoretically immediately dispatched to shippers to pick up freight for their return loads. It is made a specific point by the management to see that trucks do not return empty. Practically, however, pick-ups are made along the route as space allows.

The manifests are filed numerically in the main office. They then constitute the basic data for billing and bookkeeping. In the event that tracers are required these manifests serve for that purpose. Invoices, made up directly from them when filed, serve as the accounts receivable ledger.

Invoices are also filed in numerical order. To get the amounts due from the shippers the weights of the various shipments are entered and an extension of the amount due. The usual heading of name of consignee and destination are also included. The rate and weight calculations do not appear on the invoice that is sent to the party who pays the freight. This extension work is handled entirely by the rate clerk. The columns are put in so that carbon extensions can be made for office file copies. This completes the record system of Allied Freight Distributors, Inc.

NEW MARMON DEALER

New Orleans, La., April 28.—G. N. Gonzales, who has been in the automobile business for a number of years, has taken on the Marmon distributorship. Mr. Gonzales is located at 2017 Canal St. Mr. Gonzales' service department is also equipped to service both Durant and Marmon automobiles.

Dollar for Dollar

We Challenge
Truck Buyers to Equal

BROCKWAY

VALUES

Get the facts on Brockway Trucks. Consult our nearest branch or distributor, or write direct to

BROCKWAY MOTOR TRUCK CORPORATION
Cortland - - - - New York

Cumulative New Commercial Car Registration Statistics, March, 1931

This table is repeated for comparative purposes only. Figures for March, 1932, will be found on Page 6.

States	Autocar	Brockway	Chevrolet	Diamond-T	Dodge	Federal	Ford	G. M. C.	Indiana	International	La France Republic	Mack	Pierce-Arrow	Reo	Sterling	Stewart	Studebaker	White	Willys-Overland	Miscellaneous	Totals	States
Alabama, 1931			139			1	123	1		10		1		1					2		278	Ala., 1931
Arizona, '31			44		2		92	3		8				1			3				153	Arizona, 31
Arkansas, 1931			80		8		136	1		10								1			236	Ark., 1931
California, '31	5		406	2	97	8	1309	29		43	1	9	1	32	17	4	23	13	14	82	2095	Calif., 1931
Conn., 1931	3	2	117	5	29	4	222	5		24	2	19	1	11		5	9	5	4	2	469	Conn.
Del., 1931	1		36		2		53	2		9		2		2			1				108	Del., 1931
Florida, 1931		2	125		11	2	217	4		11		2					1	4		2	381	Florida, 1931
Idaho, 1931			28		5		87	2		7	1			2					6	1	139	Idaho, 1931
Illinois, 1931	3	6	470	23	63	9	655	28		130	1	3		12	7		22	7	16	47	1502	Illinois, 1931
Indiana, 1931		5	417	2	52	2	450	14		95	2			4		9	13	3	18	9	1095	Indiana, '31
Iowa, 1931		1	336	4	31		334	2		79		6		9			13	1	6	7	829	Iowa, 1931
Kentucky, '31			104	1	18	1	142	8		21		11		3			6	1	1	3	320	Kentucky, '31
Louisiana, '31			120		4		170	3		41		5						4	1	1	349	La., 1931
Maine, '31			158		19		244	1		14				5		1	7	1			450	Maine, '31
Maryland, 1931	12		150	6	15	5	192	7		29		8		5		1	4	2	6	8	450	Maryland, '31
Mass., 1931	20	11	239	1	69	7	752	35		59		12		24	7	6	10	9	4	20	1285	Mass., 1931
Michigan, '31			265	2	39	8	625	12		47	5	3		13		2	4	5	6	17	1053	Mich., 1931
Minnesota, '31			437	7	58	3	527	14		104	2	1		16			20	4	25	12	1230	Minn., 1931
Missouri, 1931	2	9	655	29	77	7	609	22		111	3	6	1	10	4	1	15	3	11	20	1595	Mo., 1931
Montana, 1931			78		8		76	1		28		2		4			4	2	4	2	209	Ment., 1931
Nebraska, 1931			137		25		211	7		32		2		1			8	2	6	5	436	Neb., 1931
Nevada, 1931		1	11		2		52	1		3							1	1		3	75	Nevada, '31
N. Hamp., '31		1	86	1	8		103	2		6		3		6		5	3				224	N. H., 1931
N. Jersey, '31	8	7	283	9	54	5	546	30		42	2	14		7	2	4	13	15	7	34	1082	N. Jer., 1931
N. Mex., 1931			29	2	4		62	1		11				1						1	111	N. Mex., '31
No. Ca'lina, '31		1	219		23		247	7		19		1		1				4	2	9	533	N. Ca'lina, '31
Nor. Dak., '31		3	48	1	5		47	2		28							2		2		138	Nor. Dak., '31
Ohio, 1931	4	11	319		48	6	557	20		96		7		14	6	14	19	8	28	37	1194	Ohio, 1931
Oklahoma, '31			116	2	16	2	176	3		26		1					1	3	3	1	350	Okla., 1931
Oregon, 1931			48		8	2	120	2		12		8		3	2		3	2	1	7	218	Oregon, 1931
Penn., 1931	25	17	542	2	145	13	960	27		108	6	35	2	28	2	15	22	24	24	28	2025	Penn., 1931
Rh. Isle, 1931	2	4	30	1	14	7	112	4		2		1		10			6		1	1	195	Rh. Isle., '31
So. Car., 1931			103		14		112	1		5				2				1		5	243	So. Car., '31
S. Dakota, '31			65	1	9		59	3		26		2		2			9			1	177	S. Dak., 1931
Tennessee, '31		2	90		8		57	2		12		1		1			2				175	Tenn., '31
Texas, '31			540		37	6	640	7		150	1	3		5		1	11	15	3	23	1442	Texas, '31
Utah, 1931			77		10		124	9		7		4	1	3			4	2	1	3	245	Utah, 1931
Vermont, 1931			39		7		43			7				3					3		102	Vermont, '31
Virginia, 1931	3	5	215		21		242	12		33	3	2				1	2	11	2	20	572	Virginia, '31
Wash., 1931			100		27	4	254	5		17		2		4			13	2		19	447	Wash., 1931
West Va., 1931	1		77	6	15		109	6		21							7	1	5	1	248	West Va., '31
Wisconsin, '31		2	341	5	26	4	433	17		56				13	2	3	19	2	30	20	973	Wis., 1931
D. of C., 1931	3		34	1	2		93	4		11	1	1		1			2	1		3	157	D. of C., 1931
Totals	91	90	7953	113	1135	106	12374	366	*	1610	30	177	6	259	49	72	302	159	242	454	25588	Totals

Combined report on Brockway-Indiana.

Trade Association News

Philadelphia Reports on Open Road Week Results

The Philadelphia Automobile Trade Association recently conducted an "open road week," with reports from members on the work accomplished. The figures so obtained have now been tabulated and a report has been sent out on them. The following is the bulletin and analysis of the returns:

It is unfortunate that only twenty-four distributors and dealers, out of a total of 175 in the Philadelphia district, supplied the data requested. This affords, however, a 13.71 per cent. (full eighth) cross-section and some interesting figures, actual and estimated, as follows:

Reports on Sixteen Makes	Cross-Section Reporting	Aggregate on Pro-Rata Basis
New prospects secured..	1,570	11,452
Old prospects contacted.	7,133	52,028
Demonstrations made...	1,003	7,316
New cars sold	176	1,284
Used cars sold	192	1,400
Salesmen employed	220	1,605

It is fair to surmise that if twenty-four concerns with 220 salesmen secured the "reported" results, that 175 concerns, operating in the same market, at the same time and under equal conditions and effort, could attain the "aggregate" results. Duplication of prospects and demonstrations would be the only influencing factors in lowering totals.

To those who reported we are furnishing their own comparative figures to the average and specific results of the group reporting.

Those who did not report may make their own comparison of performance.

Both classes will find interesting "food for thought," particularly those under average.

Your special attention is called to the per cent. rates of results as shown on the attached table. They clearly indicate the value of the "demonstration."

The committee has not made its award to salesmen for "the best approach" and the "best closing argument" used and reported. Particulars of selection will be announced shortly, together with the name of the winner for the best article on "why the public should buy cars now."

Analysis of reports by twenty-four distributors and dealers (in total of 175 in the Philadelphia district), covering "Open-Road Week" results, April 9 to 16, inclusive:

Total New Prospects	All Dealers
Total reported 1,570	
Company average for week...	65.42
Company average daily.....	9.35
Men average for week.....	7.14
Men average daily.....	1.02
High company total for week.	192.00
High company average daily.	27.4
High men total for week.....	21.43
High men average daily.....	3.06
Low company total for week.	5.00
Low company average daily..	.71
Low men total for week.....	1.67
Low men average daily.....	.24

Total Old Prospects Contacted	All Dealers
Total reported 7,133	
Company average for week...	297.2
Company average daily.....	42.46
Men average for week.....	32.42
Men average daily	4.63
High company total for week.1,739	
High company average daily.	248.4
High men total for week.....	85.67
High men average daily.....	12.24
Low company total for week.	23.00
Low company average daily..	3.3
Low men total for week.....	6.67
Low men average daily	.95

Total Demonstrations	
Total reported 1,003	
Company average for week..	41.8
Company average daily.....	5.97
Men average for week.....	4.56
Men average daily.....	.65
High company total for week	174.00
High company average daily..	24.9
High men total for week.....	10.88
High men average daily.....	1.55
Low company total for week.	5.00
Low company average daily..	.7
Low men total for week.....	1.67
Low men average daily.....	.24

Total New Cars Sold	
Total reported 176	
Company average for week..	7.33
Company average daily.....	1.05
Men average for week.....	.8
Men average daily.....	.114
High company total for week.	27.00
High company average daily.	3.85
High men total for week....	4.00
High men average daily.....	.571
Low company total for week.	..
Low company average daily..	..
Low men total for week.....	..
Low men average daily.....	..

Total Used Cars Sold	
Total reported 192	
Company average for week..	8.00
Company average daily.....	1.14
Men average for week.....	.873
Men average daily.....	.125
High company total for week.	19.00
High company average daily.	2.71
High men total for week.....	3.75
High men average daily.....	.536
Low company total for week....	
Low company average daily.. ..	
Low men total for week..... ..	
Low men average daily..... ..	

Using above cross-sections of 10.13 per cent. to total distributors and dealers, aggregate would show results as follows:

Total new prospects.....11,452	
Total old prospects contacted.	52,028
Total 63,480	
Total demonstrations	7,316
Total new cars sold.....	1,284
Total used cars sold.....	1,400
Total salesmen used.....	1,605

New car sales to all prospects were at rate of 2.022 per cent.

New car sales to new prospects were at rate of 11.21 per cent.

New car sales to demonstrations were at rate of 17.54 per cent.

Demonstrations to all prospects were at rate of 11.52 per cent.

Demonstrations to new prospects were at rate of 63.89 per cent.

Note—Term "men," as used, applies to salesmen.

Vancouver Dealers Stage Successful Spring Show

Vancouver, B. C., April 28.—The Vancouver Motor Dealers' Association is staging its spring show here this week. There has been a very gratifying attendance, though it is still too early to make any definite announcement of the number of people visiting the exhibition.

All the dealers who are exhibiting agree that the crowds in attendance are greater than they had expected and that the buying trend is more evident than they had dared hope. Given good weather for the rest of the week, and there is little doubt that the attendance figures will break the record established last year.

BUDD-MICHELINE RAIL CAR AROUSES INTEREST

Executives and operating officials of fourteen of the larger railroads and street railway systems, representatives of the Amtorg Trading Corporation and a number of leading engineers in various lines, have inspected the new Budd-Micheline pneumatic tired rail car since its initial public demonstration late in February, according to officials of the Edward G. Budd Manufacturing Company. The new car, which is of stainless steel construction and has an operating cost of approximately one-half to one-third that of existing rail cars, has been running experimentally at irregular intervals between Philadelphia and Bridgeport, Pa.

OILZUM VITALUBE MARKETED

The White & Bagley Company, Worcester, Mass., has just placed a new product on the market in the shape of Vitalube. This product comes in two ounce bottles for mixing with five gallons of gasoline. It is claimed that the product lessens carbon formation, frees sticky valves, preserves smooth valve action and lubricates the upper part of the engine.

The company also offers for lease to dealers handling the product a Vitalube merchandising unit, consisting of a plated display rack with sign and twenty-four two ounce bottles of the product. The Vitalube is also sold in pint tins with a long reversible spout.

ROTARY PNEUMATIC ROD GRINDER

The Chicago Pneumatic Tool Company, Chicago, Ill., is placing on the market a rotary pneumatic rod grinder, designed for smoothing and grinding any surface that is to be smooth finished.

This tool was first designed for use in railway shops in grinding side rods, valve rods, smoothing jaws in main rods for new brasses, grinding relief brasses fitted to rods, grinding frame pedestal jaws and grinding holds in frames for refitting brake pins. The tool has been adapted for use in other industries, particularly the automotive.

The grinder includes governor control, a removable air strainer, heavy-duty radial and thrust ball bearings for the wheel, renewable rotor liner, rotor mounting on ball bearings and a design especially arranged for reducing vibration.

The machine takes a 2½ by 6 by ¾-inch wheel. It is 27 inches long overall, has a light speed of 5,800 r. p. m.

MONARCH MACHINE TOOL CATALOGUE

The Monarch Machine Tool Company, Sidney, O., is putting out a new and elaborate catalogue covering its tool room lathes. The publication is profusely illustrated and the pictures shown are excellent examples of photography and cut-making. As a matter of fact, many of the photographs used might well be entered in photographic exhibitions.

SAFETY HORN RING

The Yankee Metal Products Corporation, New York city, is putting out a safety wheel horn ring. This device is designed to permit the driver to sound the horn, even when one hand is engaged in shifting or when driving conditions demand both hands on the wheel.

The Yankee horn ring is placed in the center of the steering wheel, where a slight pressure from one finger or the touch of an arm sounds the horn.

In This Corner . . . .

Opinions, suggestions, complaints, criticisms, grievances or what have you. Open to every one to say anything, anyhow, any time. The communications printed in this department represent the ideas and opinions of our readers. They are not necessarily ours. If you have something to say on any phase of automotive activity, wholesale, retail or abusive, let us hear from you and we will tell the world.

LAUDS A. D. N. STAND ON POISONOUS PUBLICITY

Automotive Daily News: Heartiest congratulations on your April 26th editorial, "Poisonous Publicity." This has needed expression for many years but nobody has had the nerve to hand it out with such a righteous and intelligent wallop as you gave it.

More power to you.

GEORGE N. SUTTON, Pres.
Sutton & Schipper, Inc., New York city.

THE AUTOMOTIVE DIESEL ENGINE

(Continued from Page 5)

propeller of revolutions per minute all the way up.

Again he states that "the cost of such an engine undoubtedly will be more than that of the Otto cycle engine, since the carburetor is inexpensive as compared with the fuel-injection system."

No mention is made of the fact that the complete ignition system—the breaker, distributor, induction coil and battery or two complete high tension magnetos and in some cases the intake manifolding, mixture ratio and spark advance controls, priming system and even the cut-off switch—is eliminated.

Again he states: "The present liquid-cooled aircraft engine weighs about 1.3 pounds per BHP dry, whereas on account of the high cylinder pressure in the heavy oil engines these weights have been considerably exceeded."

Has it occurred that early pioneer and especially experimental designs of Otto cycle engines are just as heavy? If the maximum pressure is higher it must be remembered that in a good design today the maximum pressure will be only 100 to 200 pounds greater than that in a high performance aircraft engine and that this increase is in conjunction with a lower rate of pressure rise.

The whole Diesel principle is frequently condemned because the Diesel engine builder was not a good engineer. The structural problem is no more complicated than in any other engine. Modern aircraft engines run with maximum pressures of 750 pounds per square inch, which is twice as high as the average maximum pressure in the automobile engine. A high speed Diesel may be designed to work at a maximum pressure of from 650-900 pounds per square inch. Light revolvers, rifles and field guns are designed to withstand 32,000 pounds per square inch and a water pressure of 140,000 pounds per square inch is used to cold work the rifle barrels in the factory. The relative simplicity of the structural problem in the Diesel is apparent.

The real problem in the Diesel engine is that of obtaining complete combustion of the air. This very problem which, to the low-speed Diesel builder, appeared insurmountable at high engine speeds is rapidly being solved. The solution not only makes high-speed operation possible, but at the same time provides more complete combustion of both the air and the fuel than was ever attained in the low-speed engine.

Of the various methods used in the attempt to obtain complete combustion of the fuel, that method is most advantageous which also results in the combustion of the greater percentage of the air. Almost any Diesel engine design will give complete combustion of the fuel if a sufficiently low fuel ratio is provided, but a high power-weight ratio requires that a high fuel-air ratio be utilized. There are several general methods used by Diesel builders in the effort to obtain complete combustion of the air in a Diesel engine.

The most common is that one which utilizes an open or integral type combustion chamber consisting usually of the upper section of the cylinder proper. In this type an effort is made to distribute the fuel to all parts of the combustion chamber by means of various types of directed spray, injected at relatively high pressures. This system is often called the directed spray type.

(To Be Continued)

Practical Application of the Five Buying Motives

(Continued from Page 3)

"'Well, we shall have to buy some new tires soon.'

"Here Mrs. Clarke took a hand in the conversation and made a comment which I was pleased to see played right into my hand.

"'We've been talking about that,' she said, 'and we've decided that it would be well for us to have the whole car gone over pretty thoroughly and get it in good running order. How much do you think it would cost, Mr. Owens?'

"'Well, that's a difficult question to answer. Once you start overhauling an old car you may find a good many things to do. Sometimes $75 will cover the job and at other times it will run to several times that before you're through. If it's only the motor which is involved, you may get off fairly light. But I've seen cars the age of yours where the rear end was starting to go, or the transmission, or the brakes, or the cooling system, as well as just the power plant. There's absolutely no way I can tell without having our shop examine it thoroughly.'

"Neither one of them said anything for a moment. Then Mrs. Clarke spoke up:

"'Jim, it might cost more than we had figured to fix up the old car. You know you've been thinking a number of times about having several minor repairs made.'

"I saw that things were beginning to break my way, so I decided to help the good cause along by a question on a slightly different task:

"'Mr. Clarke, do you use your car for business?'

"'Yes, a good deal of the time. Why?'

"'Well, I was just thinking,' I replied. 'You know the old saying, "Nothing succeeds like success."'

"'Hmmm,' he said, and looked very thoughtful.

"'Well, it's something that at least enters into the matter,' I murmured, and then quickly went on:

"'But to get back to this matter of overhauling. An overhaul job, to be complete, ought to go into a very thorough check-up of the safety elements of your car. The brake lining, for example, and the steering mechanism, ought to be carefully checked up in a car as old as yours. The older these cars get, the less certain you can be that they're going to behave just as you'd like to have them when an emergency arises.'

"I let that one sink in a minute, for I saw that neither Clarke nor Mrs. Clarke was missing the point of it.

"After a moment I turned to Mrs. Clarke and said:

"'Mrs. Clarke, did you ever ride in a more comfortable car than the one you rode in Tuesday? Did you ever see a car that handled more easily in traffic? Or that was more readily parked and maneuvered among other vehicles?'

"That remark seemed suddenly to overcome some internal resistance in Mrs. Clarke. Apparently, the demonstration remained very vividly in her mind. I didn't have to say another word. Without realizing it, she was doing a mighty good job of selling. And she was unable to cover her enthusiasm, although she tried.

"She reminded Clarke of how smoothly the car had taken that badly paved section of Locust Street which had been a Waterloo to their old car for six months. She reminded him how it glided along over all the bumps without the least jolting. She spoke of how we had sailed away from the other cars in the line-up at every traffic stop. She spoke of how troublesome their old car was to park and how easily our car had backed into a restricted spot which I had purposely picked in order to give them a striking demonstration of 'park ability.' It was really a pleasure to watch her work. I tell you, Mr. Carroll, that woman's a born salesman!

(To Be Continued)

Major Specifications and Mechanical Details of 1932 Commercial Cars

LEADING MAKES NATIONALLY DISTRIBUTED

Make and Model	Capacity—Tons or Lbs.	Chassis Price	Engine	Valve Arr'g'm't	No. of Cyls.	Bore and Stroke	Piston Disp.	Tax H. P.	Max. Brake H. P. and Peak R. P. M.	Type Camshaft Drive	Radiator Make	Clutch Make	Universals Make	Steering Gear Make	Carburetor Make	Fuel Feed Type	Make Electr'l System	Transmission Make	No. Spds. For.	Rear Axle Make	Type Final Drive	Final Gear Reduction	Type Service Brakes	Area Service Brake Lining	Standard Wheel Base	Chassis Wgt.	Standard Tire Sizes Front	Standard Tire Sizes Rear
Austin	400	475	Own	L	4	2.2x3	45.6	7.8	13@3000	G	Hex	Rock	Spic	Own	Til	Gra	Aut	W-G	3	Sal	Sp	5.25	O4M	76.5	75	1210	3.75x18	3.75x18
Autocar B	1½	2250	Own	L	6	3⅜x4¾	314.0	33.7	75@2400	G	G & O	Br-L	Spic	Ross	Str	P	DR	Br-L	4	Own	Sp	33.4	4IH	388	*159	5350	20x7.00	20x7.00D
Autocar A	1½-2	3200	Own	L	6	4 x4¾	358.0	38.4	82@2400	G	G & O	Long	Spic	Ross	Str	P	DR	Own	5	Own	Sp	29.7	LO4IDV*	460	150	5400	20x8.25	20x8.25
Autocar D	2-2½	3500	Own	L	6	4 x4¾	358.0	38.4	82@2400	G	Per	Long	Spic	Ross	Str	Vac	DR	Own	4	Own	2 R	33 5	LO4IDV*	460	150	5600	20x8.25	20x8.25D
†Autocar SH	2½-3	4300	Own	L	6	4¼x4¾	404.0	43.4	92@2400	G	Own	Long	Spic	Ross	Str	Gra	DR	Own	4	Own	2 R	44 0	O2IM-T	328	114	6770	34x7	34x7D
†Autocar H	2½-3	4100	Own	L	4	4½x5½	350.0	32.4	45@1450	G	Own	Long	Spic	Ross	Str	Gra	DR	Own	4	Own	2 R	54 3	O2IM	516	114	7600	40x8	40x8D
†Autocar HS	3-3½	4600	Own	L	4	4½x5½	350.0	32.4	45@1450	G	Own	Long	Spic	Ross	Str	Gra	DR	Own	4	Own	2 R	54.3	O2IM-T	516	114	8100	40x8	40x8D
†Autocar SHS	3-3½	4800	Own	L	6	4¼x4¾	404.0	43.4	92@2400	G	Own	Long	Spic	Ross	Str	Vac	DR	Own	4	Own	2 R	41.2	OL4IHV-T	574	174	7990	20x9.75	20x9.75D
Autocar N	3-3½	4600	Own	L	6	4¼x4¾	404.0	43.4	92@2400	G	Own	Long	Spic	Ross	Str	Vac	DR	Own	12	Own	2 R	101 3	LO4IDV	602	192	9300	20x10.50	20x10.50D
Autocar TFA	3½-5	6100	Own	L	6	4½x4¾	453.0	48.6	101@2400	G	Own	Long	Spic	Ross	Str	Vac	DR	Own	4	Own	2 R	51.7	O4IMV-T	516	172	9500	24x10.50	24x10.50D
Autocar C	3½-5	5900	Own	L	6	4½x4¾	453.0	48.6	101@2400	G	Own	Long	Spic	Ross	Zen	P	NE	Br-L	12	Wis	2 R	89.2	W4IA-T	674	180	12300	24x10.50	24x10.50D
Autocar FE	7½	11000	Ster	L	6	5¼x6	780	66.2	156@1800	G	G & O	Br-L	Spic	Ross	Zen	P	NE	Br-L	12	Tim	Wo	82.2	W6IA-T	720	198	16300	20x9.75	20x9.75D
*Autocar GE	10	12500	Ster	L	6	5¼x6	780	66.2	156@1800	G	G & O	Br-L	Spic	Ross	Zen	P	NE	Br-L	12	Tim	Wo	82.2	W6IA-T	720	198	16300	20x9.75	20x9.75D
Brockway 80 C	* 9500	1215	Con	L	6	3¼x4	214.7	27.3	71@3200	C	G &O	Borg	Spic	Ross	Zen	P	Aut	W-G	4	Tim	Sp	36.2	CB4IM	*248	149	4075	20x6.00	20x6.00D
Brockway 90 C	*11500	1525	Con	L	6	3⅜x4⅝	248.2	27.3	70@3200	C	G & O	Borg	Spic	Ross	Zen	P	Aut	W-G	4	Tim	Sp	37.4	CB4IM	280	149	4355	20x6.50	20x6.50D
Brockway 92 C	*12500	1800	Con	L	6	3⅜x4⅝	248.2	27.3	70@3200	C	G & O	Borg	Spic	Ross	Zen	P	Aut	W-G	4	Tim	Sp	37.4	CB4IM	280	149	4450	32x6.00	32x6.00D
Brockway 120 C	*15000	1990	Con	H	6	4 x4⅛	311.0	38.4	73@2400	C	G & O	Br-L	Spic	Ross	Zen	P	*Aut	Br-L	4	Tim	Sp	38.5	L4IH	353	156	5550	32x6	32x6D
Brockway 140 C	*17500	2495	Con	H	6	4 x4⅛	311.0	38.4	73@2400	C	G & O	Br-L	Spic	Ross	Zen	P	*Aut	Br-L	4	Wis	2 R	43.5	L4IHV	386	156	6100	32x6	32x6D
Brockway 141 C	*19500	2935	Con	H	6	4 x4⅛	311.0	38.4	73@2400	C	G & O	Br-L	Spic	Ross	Zen	P	*Aut	Br-L	4	Wis	2 R	46.2	L4IHV	380	170	6500	32x6	32x6D
Brockway 160 C	*19500	3160	Con	H	6	4⅛x4¾	380.9	40.8	89@2200	C	G & O	Br-L	Spic	Ross	Zen	P	*Aut	Br-L	4	Wis	2 R	46.6	L4IHV	380	170	7100	32x6	32x6D
Brockway 170 C	*19500	3660	Con	H	6	4⅜x4¾	427.5	45.9	100@2200	C	G & O	Br-L	Spic	Ross	Zen	P	*Aut	Ful	5	Wis	2 R	52.4	L4IHV	471	170	8100	34x7	34x7D
Brockway 175 C	*22000	3820	Con	H	6	4⅛x4¾	380.9	40.8	89@2200	C	G & O	Br-L	Spic	Ross	Zen	P	*Aut	Br-L	4	Wis	2 R	50.7	L4IHV	546	170	8675	36x8	36x8D
Brockway 195 C	*25000	4560	Con	H	6	4⅜x4¾	427.5	45.9	100@2200	C	G & O	Br-L	Spic	Ross	Zen	P	*Aut	Br-L	4	Wis	2 R	50.7	L4IHV	546	212	9000	22x10.50	22x10.50D
Brockway 200 C	*28000	5850	Con	H	6	4½x5¼	501.0	48.6	120@2200	C	G & O	Ful	Spic	Ross	Zen	P	*Aut	Ful	4	Wis	2 R	50.7	L4IHV	546	212	9000	22x10.50	22x10.50D
Chevrolet	½	345	Own	H	6	3⅛x3¾	194.0	26.3	50@2600	G	Har	Own	Own	Own	Car	P	DR	Own	3	Own	Sp	13.6	O4IM	101	109	*1880	19x4.75	19x4.75
Chevrolet	1½	520	Own	H	6	3⅛x3¾	194.0	26.3	50@2600	G	Har	Own	Own	Own	Car	P	DR	Own	4	Own	Sp	13 4	——	—	131	2700	30x5	32x6
Chevrolet	1½	575	Own	H	6	3⅛x4¾	194.0	26.3	50@2600	G	Har	Own	Own	Own	Car	P	DR	Own	4	Own	Sp	33 4	O4IM	170	157	3015	30x5	30x5D
Diamond T 216 B	1½	795	Her	L	6	3⅜x4¼	228.0	27.3	56@2400	G	G & O	Borg	Spic	Ross	Zen	P	Aut	W-G	4	Cla	Sp	——	L4IH	252	135⅛	3260	20x6.50B	20x6.50B
Diamond T 316	2	1195	Her	L	6	3⅝x4¼	263.0	29.4	65@2400	G	G & O	Borg	Spic	Ross	Zen	P	Aut	W-G	4	Cla	Sp	——	L4IH	350	155	4400	20x6.50B	20x6.50DB
Diamond T 303 F	2-2½	1795	Her	L	6	3¾x4½	298.0	33.7	67@2400	G	G & O	Cov	Spic	Ross	Zen	P	Aut	Cov	4	Cla	Sp	——	L4IHV-T	350	159¾	5100	20x7.00B	20x7.00DB
Diamond T 551 B	2½-3	2395	Her	L	6	4 x4½	339.0	38.4	74@2400	G	G & O	Cov	Spic	Ross	Zen	P	Aut	Cov	4	Cla	Sp	——	L4IHV-T	408	168	6000	20x7.50B	20x7.50DB
Diamond T 303 F B	2-2½	2425	Her	L	6	4 x4½	339.0	38.4	74@2400	G	G & O	Cov	Spic	Ross	Zen	P	Aut	Cov	4	Tim	Sp	——	L4IHV	408	199	6100	20x7.50	20x7.50DB
Diamond T 504 A	3	2650	Her	L	6	4 x4½	339.0	38.4	74@2400	G	G & O	Cov	Spic	Ross	Zen	P	L-N	Cov	4	Cla	Sp	——	L4IHV-T	408	176½	6400	20x8.25B	20x8.25DB
Diamond T 506 A	3	2950	Her	L	6	4¼x4½	383.0	43.3	85@2200	G	G & O	Cov	Spic	Ross	Zen	P	Aut	Cov	5	Wis	2 R	——	L4IHV-T	499	169	7500	20x9.00B	20x9.00DB
Diamond T 603	3-4	3395	Her	L	6	4⅜x4¾	428.4	45.9	94@2200	G	G & O	Cov	Spic	Ross	Zen	P	L-N	Cov	5	Wis	2 R	——	L4IHV-T	499	187½	7500	20x9.00B	20x9.00DB
Diamond T 606 B	3-4	3695	Her	L	6	4½x5¼	501.0	48.6	110@2200	G	G & O	Cov	Spic	Ross	Zen	P	L-N	Cov	5	Wis	2 R	——	W4IA	552	178	9300	22x9.75B	22x9.75DB
Diamond T 750	4-5	4925	Her	L	6	4⅝x5¼	529.0	51.4	114@2200	G	G & O	Cov	Spic	Ross	Zen	P	Aut	Cov	4	Wis	2 R	——	L6IHV-T	571	189½	8300	36x8P	36x8P
*Diamond T 801	4	4140	Her	L	6	4⅜x4¾	428.4	45.9	94@2200	G	G & O	Cov	Spic	Ross	Zen	P	Aut	Br-L	7	Own	Wo	——	W4IA-T	238	190	11000	34x7P	34x7DP
*Diamond T 1201	6	5600	Her	L	6	4½x5¼	501.0	48.6	110@2200	G	G & O	Cov	Spic Blo	Ross	Zen	P	Aut	Br-L	7	Tim	Wo	——	W4IA-T	238	190	11700	36x8P	36x8DP
*Diamond T 1602	8	6400	Her	L	6	4⅝x5¼	529.0	51.3	114@2400	G	G & O	Cov	Spic Blo	Ross	Zen	P	Aut	Br-L	7	Tim	Wo	——	W4IA-T	238	194	12500	36x8P	36x8D
*Diamond T 1603	8	7500	Wak	L	6	5 x5¾	677.4	60.0	127@2000	G	G & O	Br-L	Spic-Blo	Ross	Zen	P	Aut	Br-L	7	Tim	Wo	——	W4IA-T	238	194	12500	36x8P	36x8D
Dodge Bros. UF 10	½	375	Own	L	4	3⅝x4¾	196.0	21.0	48@2800	G	Fed	Borg	Un	Own	Car	P	DR	Own	3	Own	Sp	12.8	O4IH	121	109	1925	19x5.00	19x5.00
Dodge Bros. F 10	½	445	Own	L	6	3¼x4¼	211.5	25.3	66@3200	C	Fed	Borg	Un	Own	Car	P	DR	Own	3	Own	Sp	12.8	O4IH	121	109	1975	19x5.25	19x5.25
Dodge Bros. U 1	¾	490	Own	L	4	3⅝x4¼	196.0	21.0	45@2800	G	Fed	Borg	Spic	Han	Car	P	DR	Own	3	Own	Sp	19.2	O4IH	189	124	2260	20x6.00	20x6.00
Dodge Bros. DA 1	¾	595	Own	L	6	3⅜x3⅞	208.0	27.3	63@3200	C	Fed	Borg	Spic	Han	Car	P	DR	Own	3	Own	Sp	19.2	O4IH	189	124	2360	20x6.00	20x6.00
Dodge Bros. U 1	1	495	Own	L	4	3⅝x4¼	196.0	21.0	45@2800	G	Fed	Borg	Spic	Han	Zen	P	DR	Own	4	Own	Sp	33.4	O4IH	206	133	2590	20x6.00	32x6
Dodge Bros. DA 1	1	595	Own	L	6	3⅜x3⅞	208.0	27.3	63@3200	C	Fed	Borg	Spic	Han	Zen	P	DR	Own	4	Own	Sp	36.1	O4IH	206	133	2690	20x6.00	32x6
Dodge Bros. UG 30	1½	525	Own	L	4	3⅝x4¾	196.0	21.0	48@2800	G	Fed	Borg	Cle	Own	Car	P	DR	Own	5	Own	Sp	36.9	O4IH	176	131	2490	6.00x20	32x6
Dodge Bros. UG31	1½	550	Own	L	4	3⅝x4¾	196.0	21.0	48@2800	G	Fed	Borg	Cle	Own	Car	P	DR	Own	5	Own	Sp	36.1	O4IH	176	131	2640	20x6.00	36x8
Dodge Bros. G 30	1½	585	Own	L	6	3¼x4¼	211.5	25.3	60@3100	—	—	—	—	—	—	P	—	—	5	Own	Sp	37.1	4HI	—	131	2560	20x6.00	32x6
Dodge Bros. UF 30	1½	595	Own	L	4	3⅝x4¾	196.0	21.0	48@2800	G	Fed	Borg	Cle	W-G	Car	P	—	—	4	—	—	—	4HI	—	157	2710	20x6.00	32x6
Dodge Bros. UF 31	1½	670	Own	L	4	3⅝x4¾	196.0	21.0	48@2800	G	Fed	Borg	Cle	W-G	Car	P	DR	Own	4	Own	Sp	37.1	O4IH	187	136	2631	20x6.00	32x6
Dodge Bros. F 30	1½	695	Own	L	6	3¼x4¼	211.5	25.3	66@3200	C	Fed	Borg	Cle	W-G	Car	P	—	—	4	Own	Sp	37 1	O4IH	229	165	2807	20x6.00	32x6
Dodge Bros. F 31	1½	770	Own	L	6	3¼x4¼	211.5	25.3	66@3200	C	Fed	Borg	Cle	W-G	Car	P	DR	Own	4	Own	Sp	37 1	O4IH	305	140	3780	20x6.00	20x6.00D
Dodge Bros. F 35	1½	1425	Own	L	6	3⅜x3⅞	208.0	27.3	63@3200	C	Fed	Borg	Cle	Han	Zen	P	DR	Own	4	Own	Sp	41.4	O4IH	305	165	3972	20x6.00	20x6.00D
Dodge Bros. F 36	1½	1485	Own	L	6	3⅜x3⅞	208.0	27.3	63@3200	C	Fed	Borg	Cle	Han	Zen	P	DR	Own	4	—	Sp	—	4HI	229	136	3345	20x7.00	20x7.00D
Dodge Bros. G 43	2	795	Own	L	6	3¼x4¾	217.7	25.3	73@3200	—	—	—	—	—	—	P	DR	Own	4	—	Sp	—	4HI	229	165	3465	20x7.00	20x7.00D
Dodge Bros. G 44	2	825	Own	L	6	3¼x4¾	217.7	25.3	73@3200	—	—	—	—	—	—	P	DR	Own	4	Own	Sp	43.7	O4IH-T	350	130	5173	20x6.50	20x6.50D
*Dodge Bros. F 40	2	1995	Own	L	6	3⅝x5	309.6	31.5	96@3000	G	Long	Borg	Cle	Sag	DL	P	DR	Own	4	Own	Sp	43.7	O4IH-T	350	165	5211	20x6.50	20x6.50D
*Dodge Bros. F 41	2	2085	Own	L	6	3⅝x5	309.6	31.5	96@3000	G	Long	Borg	Cle	Sag	DL	P	DR	Own	4	Own	Sp	50.0	O4IH-T	229	136	5311	20x7.00	20x7.00D
*Dodge Bros. F 42	2	2180	Own	L	6	3⅝x5	309.6	31.5	75@3200	C	Fed	Borg	Cle	Own	Car	P	DR	Own	5	Own	Sp	46.3	O4IH	382	135	4235	32x6	32x6D
Dodge Bros.	3	1515	Own	L	6	3⅜x4½	241.0	27.3	78@3000	C	Long	Borg	Un	Han	Zen	Vac	NE	Own	4	Own	Sp	46.3	O4IH	382	165	4520	32x6	32x6D
Dodge Bros.	3	1565	Own	L	6	3⅜x4½	241.0	27.3	78@3000	C	Long	Borg	Un	Han	Zen	Vac	NE	Own	4	Own	Sp	46.3	O4IH	382	185	4715	32x6	32x6D
Dodge Bros.	3	1615	Own	L	6	3⅜x4½	241.0	27.3	78@3000	C	Fed	Borg	Un	Han	Zen	Vac	NE	Own	4	Own	2 R	56.6	O4IH-T	416	146	5543	32x6	32x6D
Dodge Bros.	3	2645	Own	L	6	3⅝x5	309.6	31.5	96@3000	G	Long	Borg	Cle	Sag	DL	P	DR	Own	4	Own	Sp	48 8	O4IH-T	416	170	5789	32x6	32x6D
Dodge Bros. F 60	3	2575	Own	L	6	3⅝x5	309.6	31.5	96@3000	G	Long	Borg	Cle	Sag	DL	P	DR	Own	4	Own	Sp	48.8	O4IH-T	416	195	5901	32x6	32x6D
*Dodge Bros. F 61	3	2695	Own	L	6	3⅝x5	309.6	31.5	96@3000	G	Long	Borg	Cle	Sag	DL	P	DR	Own	5	Own	Sp	52.7	B4IA-T	650	146	7640	20x9.75	20x9.75D
*Dodge Bros. F 62	3	5250	Own	L	8	3½x5	384.8	39.2	120@3000	G	Long	Borg	Cle	Sag	Str	P	DR	Own	5	Own	Sp	69.6	B4IA-T	650	170	7840	20x9.75	20x9.75D
Dodge Bros G 80	4	5285	Own	L	8	3½x5	384.8	39.2	120@3000	G	Long	Borg	Cle	Sag	Str	P	DR	Own	5	Own	Sp	69.6	B4IA-T	650	195	8040	20x9.75	20x9.75D
Dodge Bros. G 81	4	5350	Own	L	8	3½x5	384.8	39.2	120@3000	G	Long	Borg	Cle	Sag	Str	P	DR	Own	5	Own	Sp	69.6	B4IA-T	650	220	8400	20x9.75	20x9.75D
Dodge Bros G 83	4	5415	Own	L	8	3½x5	384.8	39.2	120@3000	G	Long	Borg	Cle	Sag	Str	P	DR	Own	5	Own	Sp	69.6	B4IA-T	650	220	8400	20x9.75	20x9.75D
Essex Com.	¾	435	Own	L	6	2¾x4½	163.0	18.2	55@3300	C	Har	Own	Spic	Gem	Mar	Vac	Aut	Own	3	Own	Sp	5 40	4M	—	110½	1970	20x5	20x5.50
Federal D 3	*1½	670	Con	L	4	3⅞x4¼	200.5	24.0	50@2700	C	Long	Borg	Cle	Gem	Zen	P	DR	W-G	4	Cla	Sp	40.8	L4IH	377	130	3225	20x6.00	32x6
Federal E 3	*1½	695	Con	L	6	3⅜x4	215.0	27.3	72@3400	C	Long	Borg	Pet	Gem	Zen	P	DR	W-G	4	Cla	Sp	40.8	L4IH	377	130	3225	20x6.00	32x6
Federal F 7	*1¾	1325	Con	L	6	3⅜x4⅝	248.0	27.3	64@2600	C	Long	Borg	Pet	Gem	Zen	P	DR	Own	4	Tim	Sp	29.2	L4IH	413	132	3765	30x5	30x5D
Federal F 8	*1¾-2	1425	Con	L	6	3⅜x4⅝	248.0	27.3	64@2600	C	Long	Borg	Pet	Gem	Zen	P	DR	Own	4	Tim	Sp	34.0	L4IH	438	132	3865	30x5	30x5D
Federal A 6	*2	1695	Con	L	6	3⅜x4⅝	248.0	27.3	64@2600	C	Long	Borg	Pet	Ross	Zen	Vac	DR	Own	4	Cla	Sp	38.5	L4IH	450	151	5110	32x6	32x6D
Federal A 6 T	*2½	1995	Con	L	6	3⅜x4⅝	248.0	27.3	64@2600	C	Long	Borg	Pet	Ross	Zen	Vac	DR	Own	4	Tim	Sp	47.1	L4IHV	659	151	5110	32x6	32x6D
Federal A 6 T W	*2½	2130	Con	L	6	3⅜x4⅝	248.0	27.3	64@2600	C	Long	Borg	Pet	Ross	Zen	Vac	DR	Own	4	Tim	Sp	52.9	L4IHV	659	151	5110	32x6	36x8
Federal T 3 W	*2½	1595	Wau	L	4	4 x5	251.0	25.6	50@2000	G	Long	Borg	Pet	Ross	Zen	Vac	DR	Own	4	Tim	Wo	36.3	L4IH	575	148	5400	32x6	32x6D
Federal T 8 W F	*2½	1795	Con	L	6	3⅜x4⅝	248.0	27.3	64@2600	C	Long	Borg	Pet	Ross	Zen	Vac	DR	Own	4	Tim	Wo	38.8	L4IHV	659	148	5400	32x6	32x6D
*Federal D 2 S W	*2½-3	1050	Con	L	4	3⅞x4¼	200.5	24.0	50@2700	C	Long	Borg	Cle	Gem	Zen	P	DR	W-G	4	Cla	Sp	40.8	L6IH	566	140	3925	20x6.00	32x6
*Federal E 2 S W	*2½-3	1150	Con	L	6	3⅜x4	215.0	27.3	60@2600	C	Long	Borg	Cle	Gem	Zen	P	DR	W-G	4	Cla	Sp	40.8	L6IH	566	145	3975	20x6.00	32x6
*Federal D 2 D	*2½-3	1350	Con	L	4	3⅞x4¼	200.5	24.0	50@2700	C	Long	Borg	Cle	Gem	Zen	P	DR	W-G	4	Cla	Sp	40.8	L6IH	566	140	4235	20x6.00	32x6
*Federal E 2 D	*2½-3	1450	Con	L	6	3⅜x4	215.0	27.3	60@2600	C	Long	Borg	Cle	Gem	Zen	P	DR	W-G	4	Cla	Sp	40.8	L6IH	566	145	4310	20x6.00	32x6
Federal T 10 B	*2½-3	2550	Con	H	6	4 x4⅛	311.0	38.4	75@2200	C	Long	Borg	Pet	Ross	Zen	P	DR	Own	4	Tim	Sp	44.5	L4IHV	659	165	6550	34x7	34x7D
Federal T 10 W	*2½-3	2645	Con	H	6	4 x4⅛	311.0	38.4	75@2200	C	Long	Borg	Pet	Ross	Zen	P	DR	Own	4	Tim	Sp	44.0	L4IHV	659	165	6550	34x7	34x7D
Federal T 10 D R	*2½-3	2685	Con	H	6	4 x4⅛	311.0	38.4	75@2200	C	Long	Borg	Pet	Ross	Zen	P	DR	Own	4	Tim	2R	45.6	L4IHV	659	165	6550	34x7	34x7D
Federal U 6	*3½-4	3860	Con	H	6	4⅛x4¾	381.0	40.8	85@2200	C	Long	Borg	Pet	Ross	Zen	P	DR	Br-L	7	Tim	Wo	64.6	L4IHV	767	165	7420	36x8	36x8D
Federal U 6 D R	*3½-4	3860	Con	H	6	4⅛x4¾	381.0	40.8	85@2200	C	Long	Borg	Pet	Ross	Zen	P	DR	Br-L	7	Tim	2R	69.6	L4IHV	767	165	7420	36x8	36x8D
*Federal A 6 S W	*4	2195	Con	L	6	3⅜x4⅝	248.0	27.3	64@2600	C	Long	Borg	Pet	Han	Zen	Vac	DR	Own	4	Cla	Sp	38.5	L6IHV	675	164	5620	32x6	32x6D
Federal C 7	*5-6	4485	Con	H	6	4⅜x4¾	428.4	45.9	100@2200	C	Long	Borg	Pet	Han	Zen	P	DR	Br-L	7	Tim	W	78.0	L4IHV	866	195	9550	20x9.75	20x9.75D
Federal C 7 W	*5-6	4485	Con	H	6	4⅜x4¾	428.4	45.9	100@2200	C	Long	Borg	Pet	Han	Zen	P	DR	Br-L	7	Tim	2R	75 2	L4IHV	866	195	9550	20x9.75	20x9.75D
Federal C 8	*5-6	4895	Con	H	6	4⅜x4¾	428.4	45.9	100@2200	C	Long	Borg	Pet	Han	Zen	P	DR	Br-L	7	Tim	Wo	78.0	L4IA	921	195	9650	20x9.75	20x9.75D
Federal C 8 W	*5-6	4895	Con	H	6	4⅜x4¾	428.4	45.9	100@2200	C	Long	Borg	Pet	Han	Zen	P	DR	Br-L	7	Tim	Wo	75.2	L4IA	921	195	9650	20x9.75	20x9.75D
Federal X 8	*7½	4335	Con	L	4	5 x6	471.0	40.0	61@1350	G	Long	Borg	Pet	Gem	Zen	Vac	AB	Br-L	7	Tim	Wo	111.0	T21MV	603	162	9750	36x6S	40x14S
Federal X 8 D R	*7½	4335	Con	L	4	5 x6	471.0	40.0	61@1350	G	Long	Borg	Pet	Gem	Zen	Vac	AB	Br-L	7	Tim	2R	106.0	T21MV	603	162	9750	36x6S	40x14S
Federal X 8 R	*7½	4735	Con	H	6	4⅜x4¾	428.4	45.9	100@2200	C	Long	Borg	Pet	Ross	Zen	P	DR	Br-L	7	Tim	Wo	111.0	T21MV	462	162	10475	40x8	40x8D
Federal X 8 R D R	*7½	4735	Con	H	6	4⅜x4¾	428.4	45.9	100@2200	C	Long	Borg	Pet	Ross	Zen	P	DR	Br-L	7	Tim	2R	106.0	T21MV	462	162	10475	40x8	40x8D
Ford	½-¾	320	Own	L	4	3⅞x4¼	200.0	—	50@2800	G	Own	Long	Spic	Gem	Zen	Gra	Own	Own	4	Own	Sp	——	—	—	106	——	20x6.00B	20x6.00DB
Ford	1½	470	Own	L	4	3⅞x4¼	200.0	—	50@2800	G	Own	Long	Spic	Gem	Zen	Gra	Own	Own	4	Own	Sp	——	—	—	131	——	20x6.00B	20x6.00DB
Ford	1½	500	Own	L	4	3⅞x4¼	200.0	—	50@2800	G	Own	Long	Spic	Gem	Zen	Gra	Own	Own	4	Own	Sp	——	—	—	157	——	20x6.00B	20x6.00DB
General Motors T-15	*6500	645	Own	L	6	3⅜x3⅞	200.3	26.3	60@3000	C	Long	Own	Mec	Sag	Mar	P	DR	Own	3	Own	Sp	16.1	B4IM	211	130	2625	20x5.50B	20x5.50B
General Motors T-18	*8200	595	Own	L	6	3⅜x3⅞	200.3	26.3	66@3200	C	Long	Own	Own	Sag	Mar	P	DR	Own	4	Own	Sp	35.7	O4IM	175	131	2800	30x5P	32x6P
General Motors T-25	*9000	1200	Buick	H	6	3⅛x4⅝	257.5	28.3	76@2500	G	Long	Own	Spic	Sag	Mar	P	DR	Own	4	Own	Sp	29.6	B4IM	239	130	3375	20x6.00B	20x7.50B
General Motors T-19	*10000	745	Own	L	6	3⅛x3⅞	200.3	26.3	66@3200	C	Long	Own	Spic	Sag	Mar	P	DR	Own	4	Own	Sp	40.7	B4IM	290	140	3110	20x5.50B	32x6P
General Motors T-26	*11000	1210	Own	H	6	3⅛x4⅝	257.5	28.3	76@2500	G	Long	Own	Spic	Sag	Mar	P	DR	Own	4	Own	Sp	35.7	B4IM	290	130	3685	20x6.50B	20x8.25B
General Motors T-30	*12500	1545	Buick	H	6	3⅛x4⅝	257.5	28.3	76@2500	G	Long	Own	Spic	Sag	Mar	P	DR	Own	4	Own	Sp	28.6	B4IM	288	141	4490	30x5P	30x5DP
General Motors T-31	14000	1695	Own	H	6	3⅛x4⅝	257.5	28.3	76@2500	G	Long	Own	Spic	Sag	Mar	P	DR	Own	4	Own	Sp	35.5	B4IM	345	141	4695	32x6P	32x6DP
General Motors T-42	*15000	1845	Buick	H	6	3⅛x4⅝	257.5	28.3	76@2500	G	Long	Own	Spic	Sag	Mar	P	DR	Own	4	Own	Sp	33.4	B4IM	320	141	4725	32x6P	32x6DP
General Motors T-44	*16000	1935	Buick	H	6	3⅛x4⅝	257.5	28.3	76@2500	G	Long	Own	Spic	Sag	Mar	P	DR	Own	4	Own	Sp	40.9	B4IM	320	141	5005	32x6P	32x6DP
General Motors T-45	*16000	1865	Own	H	6	3⅛x4⅝	257.

Major Specifications and Mechanical Details of 1932 Commercial Cars

LEADING MAKES NATIONALLY DISTRIBUTED

(Continued from Page 9)

Make and Model	Capacity—Tons or Lbs.	Chassis Price	Engine	Valve Arr'g'm't	No. of Cyls.	Bore and Stroke	Piston Disp.	Tax H. P.	Max. Brake H. P. and Peak R. P. M.	Type Camshaft Drive	Radiator Make	Clutch Make	Universals Make	Steering Gear Make	Carburetor Make	Fuel Feed Type	Make Electr'l System	Make Transmission	No. Spds. For.	Rear Axle Make	Type Final Drive	Final Gear Reduction	Type Service Brakes	Area Service Brake Lining	Standard Wheel Base	Chassis Wt.	Standard Tire Sizes Front	Rear
Indiana 19 DR	3½	3400	Her	L	6	4⅜x4¾	428.4	45.9	94@2200	G	Yo	Br-L	Spic	Ross	Str	P	Aut Br-L		4	Wis	2R	52.3	L4IHV	489	170	8100	20x9.00	20x9.00D
Indiana 17 SBT 250	4	3250	Her	L	6	4⅜x4¾	428.4	45.9	94@2200	G	Yo	Br-L	Spic	Ross	Str	P	Aut Br-L		4	Tim	Sp	37.8	L4IHV	625	188	8200	34x7	34x7D
*Indiana 17 SW 250	4	3475	Her	L	6	4⅜x4¾	428.4	45.9	94@2200	G	Yo	Br-L	Spic	Ross	Str	P	Aut Br-L		4	Tim	Wo	38.1	L4IHV	625	188	8500	34x7	34x7D
Indiana 43 DR	4	4300	Her	L	6	4½x5¼	501.0	48.6	110@2200	G	Yo	Br-L	Spic	Ross	Str	P	Aut Br-L		4	Wis	2R	50.7	L4IHV	546	170	8500	20x9.75	20x9.75D
Indiana 45 DR	5	4800	Her	L	6	4⅜x5¼	529.0	51.3	115@2200	G	Yo	Br-L	Spic	Ross	Str	P	Aut Br-L		4	Wis	2R	45.4	L4IHV	546	170	8700	20x9.75	20x9.75D
International A 1	¾	615	Wak	L	4	3⅜x4½	186.0	21.0	39@2400	G	Mod	Mec	Mec	Ross	Zen	Vac	DR W-G		4	Own	Sp	39.5	BE4IM	212	136	2930	5.50x20	5.50x20
International A 2	1½	615	Wak	L	4	3⅜x4½	186.0	21.0	39@2400	G	Mod	Mec	Mec	Ross	Zen	Vac	DR W-G		4	Own	Sp	39.5	BE4IM	212	136	*2935	6.00x20	6.00x20
International B 2	1½	665	Wak	L	4	3⅜x4½	186.0	21.0	39@2400	G	Mod	Mec	Mec	Ross	Zen	Vac	DR Mec		4	Own	Sp	47.3	BE4IM	212	136	2960	6.00x20	6.00x20
International A L 3	1½	1450	Lyc	L	6	3¼x4½	224.0	25.3	54@2700	G	Mod	Own	Mec	Ross	Zen	Vac	DR W-G		4	Own	Sp	42.9	B4IM	295	138	4032	20x6.00	20x6.00D
International A 3	1½	795	Lyc	L	6	3¼x4½	224.0	25.3	54@2700	G	Mod	Rock	Mec	Ross	Zen	P	DR W-G		4	Own	Sp	33.8	BE4IM	287	136	3500	6.00x20	6.00x20
International A 3½	1½	1250	Lyc	L	6	3¼x4½	224.0	25.3	54@2700	G	Mod	Rock	Mec	Ross	Zen	P	DR W-G		4	Own	Sp	34.9	BE4IM	302	136	3700	6.00x20	6.00x20D
International A 4	2	1750	Own	H	6	3⅜x4½	279.0	31.5	67@2600	G	Mod	Own	Mec	Ross	Zen	Vac	DR Own		5	Own	Sp	47.8	BE4IH*	378	145	5221	32x6	32x6D
International W 1	2½	3850	Hall	H	4	4¼x5½	312.0	28.9	59@2000	G	Own	Own	Own	Own	Zen	Vac	RB Own		5	Own	2R	60.5	BE4IM	710	148	8300	36x5S	36x8S
International A 5	3	2350	Own	H	6	3⅜x4½	279.0	31.5	67@2600	G	Mod	Own	Mec	Ross	Zen	Vac	DR Own		5	Own	Sp	52.6	BE4IM*	430	156	6120	34x7	34x7D
International A 6	3	2675	Own	H	6	3⅜x4½	279.0	31.5	67@2600	G	Mod	Own	Mec	Ross	Zen	Vac	DR Own		5	Own	Sp	62.5	BE4IM*	430	156	6120	34x7	34x7D
International W 3	3½	4850	Hall	H	4	4¾x5½	390.0	36.1	69@2000	G	Own	Own	Own	Own	Zen	Vac	RB Own		5	Own	2R	70.5	BE4IM	794	160	10125	36x6S	40x12S
International A 7	5	6200	Own	H	6	4½x5½	525.0	48.6	117@2200	G	Mod	Rock	Mec	Ross	*Zen	P	DR Own		5	Own	2 R	52.3	BO4IM-T	730	123	11250	9.75x20	9.75x20D
International A 8	5	6300	Own	H	6	5 x5½	650.0	60.0	136@2100	G	Mod	Rock	Mec	Ross	*Zen	P	DR Own		5	Own	2 R	52.3	BO4IM-T	730	123	11250	9.75x20	9 75x20D
La France Rep. A 1	* 6000	795	Lyc	L	6	3 x4¾	201.5	21.5	60@2500	G	G&O	Borg	Spic	Han	Zen	Vac	Aut Ful		4	Tim	Sp	36.1	L4IH	378	132	3000	20x5.50	32x6
La France Rep. C 1	* 7500	1295	Lyc	L	6	3¼x4½	224.0	25.4	61@2750	G	G&O	Borg	Spic	Han	Zen	Vac	Aut Ful		4	Tim	Sp	35.8	L4IH	413	144	3300	20x6.90	32x6
La France Rep. D 1	* 9000	1595	Lyc	L	6	3¼x4½	224.0	25.4	61@2750	G	G&O	Borg	Spic	Han	Zen	Vac	Aut Ful		4	Tim	Sp	37.9	L4IH	448	144	3725	30x5	30x5D
La France Rep. C 2	*10000	995	Lyc	L	6	3¼x4½	224.0	25.3	61@2800	G	Per	Borg	Spic	Han	Zen	P	Aut Ful		4	Tim	Sp	35.9	L4IH	—	150	——	20x6.00B	20x6.00DB
La France Rep. D 2	*11500	1295	Lyc	L	6	3⅜x4½	242.0	27.3	65@2800	G	Per	Borg	Spic	Han	Zen	P	Aut Ful		4	Tim	Sp	37.9	L4IH	—	162	——	20x6.00B	20x6.00DB
La France Rep. E 1	*13000	1985	Bud	L	6	3½x4½	260.0	29.5	69@2600	G	Per	Borg	Spic	Ross	Zen	Vac	Aut Ful		4	Tim	Sp	47.0	L4IHV	578	162	5000	20x7.50	20x7.50D
La France Rep. F 3	*15000	2395	Lyc	L	6	3¾x4½	299.0	33.7	80@2500	G	Per	Ful	Spic	Ross	Zen	P	Aut Ful		4	Tim	Sp	50.6	L4IHV-T	656	174	5625	34x7	34x7D
La France Rep. H 2	*16000	2985	Lyc	L	6	3⅞x5	354.0	36.0	85@2300	G	Per	Ful	Spic	Ross	Zen	P	Aut Ful		4	Wis	2R	41.6	L4IHV	658	174	6370	34x7	34x7D
La France Rep. H 3	*18000	3395	Bud	L	6	4⅛x4¾	393.0	42.1	94@2400	G	Per	Ful	Spic	Ross	Zen	P	Aut Ful		4	Tim	2R	54.0	L4IHV-T	768	179	7450	20x9.75B	20x9.75DB
La France Rep. M 2	*20000	4000	Wak	L	6	4⅜x5⅛	462.0	46.0	97@2000	G	Per	Ful	Spic	Ross	Zen	P	Aut Ful		5	Wis	2R	51.0	L4IHV	768	174	7500	36x8	36x8D
La France Rep. M 3	*22000	4750	Wak	L	6	4⅜x5⅛	462.0	46.0	97@2000	G	Per	Ful	Spic	Ross	Zen	P	Aut Ful		5	Tim	2R	62.5	L4IHV-T	768	191	8300	20x10.50B	20x10.50DB
La France Rep. 35-2	*24000	5600	Wak	L	6	4½x5¾	549.0	48.6	98@1850	G	Own	Ful	Spic	Ross	Zen	P	Aut Ful		4	Wis	2R	45.4	L4IHV	870	174	9250	38x9	38x9D
La France Rep. 35-3	*28000	6400	Wak	L	6	4⅜x5⅛	517.0	51.0	100@1800	G	Per	Ful	Spic	Ross	Zen	P	Aut Ful	12	Tim	2R	111.5	W4IA-T	1054	191	10300	24x10.50B	24x10.50DB
La France Rep. Q 4	*30000	8500	Own	H	12	4 x5	754.0	76.7	240@2900	C	Own	Long	Blo	Ross	Zen	P	DR Br-L		4	Tim	2R	Opt	W4IA	—	Opt	12750	24x10.50B	24x10.50DB
La France Rep. Q 6	*40000	11000	Own	H	12	4 x5	754.0	76.7	240@2900	C	Own	Long	Blo	Ross	Zen	P	DR Br-L		4	Tim	4R	Opt	W6IA-T	—	Opt	14900	30x10.50B	30x10.50DB
††Mack B L	——	2500	Own	L	6	3¼x5	248.9	25.3	63@2800	G	Own	Own	Spic	Gem	Str	Vac	NE Own		4	Tim	Sp	Opt	L4IH	302	148	*4450	22x9.75B	22x9 75B
††Mack B G	——	3000	Own	L	6	3⅝x5	309.6	31.5	75@2600	G	Own	Own	Spic	Own	Str	Vac	NE Own		4	Own	Sp	Opt	O4IV	415	156	5200	20x6.00B	20x6.00DB
††Mack A B	——	4350	Own	L	4	4¼x5	283.7	28.9	60@2200	G	Own	Own	Spic	Own	Str	Gra	NE Own		4	Own	2 R	Opt	O4IV	471	146½	7100	32x6	32x6D
Mack A B	——	4000	Own	L	4	4¼x5	283.7	28.9	60@2200	G	Own	Own	Spic	Own	Str	Vac	NE Own		4	Own	Ch	Opt	O4IV	471	146½	6850	34x7	34x7D
Mack A B	——	4500	Own	L	6	3⅝x5	309.6	31.5	75@2600	G	Own	Own	Spic	Own	Str	Gra	NE Own		4	Own	2 R	Opt	O4IV	471	146½	7050	34x7	34x7D
††Mack A B	——	4150	Own	L	6	3⅝x5	309.6	31.5	75@2600	G	Own	Own	Spic	Own	Str	Vac	NE Own		4	Own	Ch	Opt	O4IV	471	146½	6850	34x7	34x7D
††Mack B C	——	5250	Own	L	6	4 x5½	417.7	38.4	100@2300	G	Own	Own	Spic	Own	Str	Vac	NE Own		4	Own	2 R	Opt	O4IV	471	154	8350	34x7	34x7D
††Mack B C	——	5500	Own	L	6	4 x5½	417.7	38.4	100@2300	G	Own	Own	Spic	Own	Str	Vac	NE Own		4	Own	Ch	Opt	O4IV	610	154	8500	36x8	36x8D
††Mack B J	——	6150	Own	L	6	4½x5½	525.2	48.6	126@2200	G	Own	Own	Spic	Own	Str	Vac	NE Own		4	Own	2 R	Opt	O4IV	567	168½	10100	36x8	36x8D
††Mack A K	——	5150	Own	L	4	5 x6	471.2	40.0	77@1800	G	Own	Own	Spic	Own	Str	Gra	NE Own		4	Own	Ch	Opt	O4IV	492	162	9800	36x8	36x8D
††Mack A K	——	5250	Own	L	4	5 x6	471.2	40.0	77@1800	G	Own	Own	Spic	Own	Str	Gra	NE Own		4	Own	2 R	Opt	O4IV	492	162	9700	36x5S	36x5DS
††Mack A C	——	4950	Own	L	4	5 x6	471.2	40.0	77@1800	G	Own	Own	Spic	Own	Str	Gra	NE Own		4	Own	Ch	Opt	OJXM	194	156	9500	36x5S	36x5DS
††Mack A K	——	6450	Own	L	6	4½x5½	525.5	48.6	126@2200	G	Own	Own	Spic	Han	Str	Vac	NE Own		4	Own	2 R	Opt	O4IV	492	174	10950	36x5S	40x5DS
††Mack A C	——	5500	Own	L	4	5 x6	471.2	40.0	77@1800	G	Own	Own	Spic	Own	Str	Gra	NE Own		4	Own	Ch	Opt	OJXM	194	156	10100	22x10.50B	22x10.50DS
††Mack A C	——	6550	Own	L	6	4½x5½	525.5	48.6	126@2200	G	Own	Own	Spic	Han	Str	Vac	NE Own		4	Own	Ch	Opt	O4IV	492	174	11950	36x6S	40x6DS
††Mack A C	——	6000	Own	L	4	5 x6	471.2	40.0	77@1800	G	Own	Own	Spic	Own	Str	Gra	NE Own		4	Own	Ch	Opt	OJXM	194	156	10450	24x10.50B	24x10.50DB
††Mack A P	——	9500	Own	L	6	5 x6	706.5	60.0	150@2000	G	Own	Own	Spic	Own	Str	Gra	NE Own		4	Own	Ch	Opt	O2IV	287	191	12200	36x7S	40x7DS
††Mack A K 6—6 wheel	——	9500	Own	L	6	4½x5½	525.2	48.6	126@2200	G	Own	Own	Spic	Own	Str	Vac	NE Own		4	Own	2 R	Opt	O6IA	574	152-52	16300	36x7S	40x8DS
††Mack A C 6 wheel	——	7650	Own	L	4	5 x6	471.2	40.0	77@1800	G	Own	Own	Spic	Own	Str	Gra	NE Own		4	Own	Ch	Opt	ORIV	574	125-52	13800	9.75x22B	5.75x22DB
††Mack A C 6—6 wheel	——	9000	Own	L	6	4½x5½	525.2	48.6	126@2200	G	Own	Own	Spic	Own	Str	Vac	NE Own		4	Own	Ch	Opt	O6IA	574	145-52	14950	36x6S	40x12S
Mack A P 6 wheel	——	11500	Own	L	6	5 x6	706.5	60.0	150@2000	G	Own	Own	Spic	Own	Str	Gra	NE Own		4	Own	Ch	Opt	O6IA	574	145-52	15250	40x8	40x8D
††Mack A P 6 wheel	——	12000	Own	L	6	5 x6	706.5	60.0	150@2000	G	Own	Own	Spic	Own	Str	Gra	NE Own		4	Own	2 R	Opt	O6IA	574	145-52	——	40x8	40x8D
Pierce-Arrow 12S	2	3150	Own	L	8	3½x5	385.0	39.2	125@2800	C	Long	Long	Cle	Han	Str	P	DR Br-L		4	Tim	Sp	33.5	B4IM-T	399	160	6000	20x8.25B	20x8.25DB
Pierce-Arrow 12T	2-2½	2950	Her	L	6	4⅛x4½	361.0	40.3	77@2400	G	Long	Long	Cle	Han	Zen	P	DR Cla		4	Tim	Sp	34.3	B4IM	399	150	5625	20x7.50B	20x7.50DB
Pierce-Arrow 14T	2½	2950	Her	L	6	3¾x4½	298.0	33.7	70@2600	G	Long	Long	Cle	Han	Zen	P	DR Cla		4	Tim	Sp	40.0	B4IM	399	150	5725	20x8.25B	20x8.25DB
Pierce-Arrow 13T	2½	3100	Her	L	6	4⅛x4½	361.0	40.3	77@2400	G	Long	Long	Cle	Han	Zen	P	DR Cov		4	Tim	Sp	34.4	B4IM	399	180	5800	20x8.25B	20x8.25DB
Pierce-Arrow 13W	3-4	4100	Her	L	6	4⅛x4½	361.0	40.3	77@2400	G	Long	Long	Cle	Han	Zen	P	DR Cov		4	Tim	Wo	41.9	B4IA-T	473	150	6660	20x9.00B	20x9.00DB
Pierce-Arrow 18R	3-4	4500	Her	L	6	4⅜x4¾	428.0	46.0	94@2200	G	Long	Long	Cle	Han	Zen	P	DR Br-L		4	Tim	Wo	28.6	B4IA	473	150	6860	20x9.00B	20x9.00DB
Pierce-Arrow 21R	3½	4700	Her	L	6	4½x5¼	501.0	48.6	110@2200	G	Long	Long	Cle	Han	Zen	P	DR Br-L		4	Tim	Wo	36.0	B4IA	473	150	7050	20x9.75B	20x9.75DB
Pierce-Arrow 24X	4-5	5400	Her	L	6	4½x5¼	501.0	48.6	110@2200	G	Long	Long	Cle	Han	Zen	P	DR Cov		4	Tim	Wo	40.2	T4IA	618	150	9250	20x10.50B	20x10.50DB
Pierce-Arrow 24M	4-5	6450	Her	L	6	4¾x5¾	611.0	54.1	130@2000	G	Long	Long	Spic	Ross	Str	P	DR Own		4	Tim	Wo	39.9	T4IA-T	618	150	10200	20x10.50B	20x10.50DB
Pierce-Arrow 28X	5½	6000	Her	L	6	4½x5¼	501.0	48.6	110@2200	G	Long	Long	Cle	Han	Zen	P	DR Cov		4	Own	Wo	53.0	TO4IA	720	160	10675	24x10.50B	24x10.50DB
Pierce-Arrow 28M	5½	6900	Her	L	6	4¾x5¾	611.0	54.1	130@2000	G	Long	Long	Spic	Ross	Str	P	DR Own		4	Own	Wo	52.5	TO4IA	720	160	11600	24x10.50B	24x10.50DB
Pierce-Arrow 28Y	5½	5850	Her	L	6	4⅝x4¾	479.0	51.3	104@2200	G	Long	Long	Cle	Han	Zen	P	DR Cov		4	Own	Wo	53.0	TO4IA	720	160	10675	24x10.50B	24x10.50DB
Pierce-Arrow 31K	5½	——	Her	L	6	4¾x5¾	611.0	54.1	130@2000	G	Long	Long	Spic	Ross	Str	P	DR Own		4	Own	Wo	42.0	TO4IA	720	170	11675	24x10.50B	40x8DS
Pierce-Arrow 75M	75000	8000	Her	L	6	5¼x6	779.0	66.1	150@1800	G	Long	Long	Spic	Ross	Str	P	DR Own		4	Own	Wo	51.9	TO4IA	720	190	12750	24x10.50B	24x10.50DB
Pierce-Arrow 24T	*24000	3200	Her	L	6	4⅛x4½	36.10	40.3	77@2400	G	Long	Long	Cle	Han	Zen	P	DR Cov		4	Tim	Sp	48.1	B4IM	399	150	5725	20x8.25	20x8.25D
Pierce-Arrow 35R	*35000	4800	Her	L	6	4⅜x4¾	428.0	46.0	94@2200	G	Long	Long	Cle	Han	Zen	P	DR Br-L		4	Tim	Wo	47.8	B4IA	473	150	7050	20x9.75	20x9.75D
Pierce-Arrow 45X	*45000	6200	Her	L	6	4½x5¼	501.0	48.6	110@2200	G	Long	Long	Cle	Han	Zen	P	DR Cov		4	Tim	Wo	57.2	T4IA	618	160	9300	20x10.50	20x10.50D
Pierce-Arrow 34L	*34000	——	Her	L	6	4½x5¼	501.0	48.6	110@2200	G	Long	Long	Cle	Han	Zen	P	DR Cov		4	Tim	Wo	49.0	T6IA	1022	200	13200	20x9.75	20x9.75D
Pierce-Arrow 41K	*44000	——	Her	L	6	5¼x6	779.0	66.1	150@1800	G	Long	Long	Spic	Ross	Str	P	DR Own		4	Tim	Wo	47.2	T6IA	1022	200	14500	20x10.50	20x10.50D
Pierce-Arrow 34K	*34000	——	Her	L	6	4¾x5¾	611.0	54.1	130@2000	G	Long	Long	Spic	Ross	Str	P	DR Own		4	Tim	Wo	40.6	T6IA	1022	200	14200	20x9.75	20x9.75D
Reo 1 A	1½	625	Own	L	4	3⅛x4½	205.0	23.3	51@2500	G	Per	Long	Cle	Ross	Zen	P	DR Cla		4	Cla	Sp	37.1	L4IH	230	136	2930	20x6.00	32x6
Reo 1 B	1½	725	Own	L	6	3¼x4	214.7	27.3	61@3000	G	Per	Long	Cle	Ross	Zen	P	DR Cla		4	Cla	Sp	33.6	L4IH	230	136	2970	20x6.00	32x6
Reo 1 C	1½	665	Own	L	4	3⅛x4½	205.0	23.3	51@2500	G	Per	Long	Cle	Ross	Zen	P	DR Cla		4	Cla	Sp	37.1	L4IH	230	160	3020	20x6.00	32x6
Reo 1 D	1½	765	Own	L	6	3¼x4	214.7	27.3	61@3000	G	Per	Long	Cle	Ross	Zen	P	DR Cla		4	Cla	Sp	37.1	L4IH	230	160	3060	20x6.00	32x6
Reo D F X	1½	1095	Own	L	6	3⅜x5	268.3	27.3	85@3200	C	Own	Long	Cle	Ross	Sch	Vac	DR Own		4	Own	Sp	34.1	L4IH	289	135	3200	20x6.00	20x6.00
Reo F A X	2	1295	Own	L	6	3⅜x5	268.3	27.3	70@2800	C	Own	Br-L	Cle	Ross	Sch	Vac	DR Own		4	Own	Sp	34.3	L4IH	289	137	3525	20x6.00	32x6
Reo F E X	2	1295	Own	L	6	3⅜x5	268.3	27.3	70@2800	C	Own	Br-L	Cle	Ross	Sch	Vac	DR Own		4	Own	Sp	34.3	L4IH	289	152	3205	20x6.00	32x6
Reo F F X	2	1395	Own	L	6	3⅜x5	268.3	27.3	70@2800	C	Own	Br-L	Cle	Ross	Sch	Vac	DR Own		4	Own	Sp	34.3	L4IH	289	156	3525	20x6.00	32x6
Reo F H X	2½	1595	Own	L	6	3⅜x5	268.3	27.3	70@2800	C	McC	Br-L	Cle	Ross	Sch	Vac	DR Own		4	Own	Sp	37.7	L4IH	289	142	3750	32x6	32x6D
Reo F C X	2½	1645	Own	L	6	3⅜x5	268.3	27.3	70@2800	C	McC	Br-L	Cle	Ross	Sch	Vac	DR Own		4	Own	Sp	37.7	L4IH	289	152	4165	32x6	32x6D
Reo F D X	2½	1745	Own	L	6	3⅜x5	268.3	27.3	70@2800	C	McC	Br-L	Cle	Ross	Sch	Vac	DR Own		4	Own	Sp	37.7	L4IH	289	168	4075	32x6	32x6D
Reo G A	3	2035	Own	L	6	3⅜x5	268.3	27.3	70@2800	C	McC	Br-L	Cle	Ross	Sch	Vac	DR Own		4	Own	Sp	40.5	L4IH-T	344	163	4625	32x6	32x6D
Reo G C	3	2140	Own	L	6	3⅜x5	268.3	27.3	70@2800	C	McC	Br-L	Cle	Ross	Sch	Vac	DR Own		4	Own	Sp	40.5	L4IH-T	344	179	4850	32x6	32x6D
Reo G D	3	2085	Own	L	6	3⅜x5	268.3	27.3	70@2800	C	McC	Br-L	Cle	Ross	Sch	Vhc	DR Own		4	Own	Sp	78.1	L4IH-T	344	144	4650	32x6	32x6D
Reo G C S	3	2375	Own	L	6	3⅜x5	268.3	27.3	70@2800	C	McC	Br-L	Cle	Ross	Sch	Vac	DR Own		4	Own	Sp	40.5	L4IH	344	210	5300	32x6	32x6D
Reo 4-H	4	2800	Own	L	6	4⅛x4¾	381.0	40.8	101@2600	G	McC	Long	Cle	Ross	Sch	P	DR Own		4	Cla	Sp	42.4	L4IHV-T	390	150	6150	8.25x20	9.00x20B
Reo 4-J	4	2875	Own	L	6	4⅛x4¾	381.0	40.8	101@2600	G	McC	Long	Cle	Ross	Sch	P	DR Own		4	Cla	Sp	42.4	L4IHV-T	390	170	6280	8.25x20	9.00x20B
Reo 4-K	4	2950	Own	L	6	4⅛x4¾	381.0	40.8	101@2600	G	McC	Long	Cle	Ross	Sch	P	DR Own		4	Cla	Sp	42.4	L4IHV-T	390	190	6395	8.25x20	9.00x20B
Stewart 30	1	695	Lyc	L	4	3¾x4½	199.0	22.5	50@2600	G	Fed	Borg	Spic	Ross	Str	P	DR W-G		4	Sal	Sp	35.1	B4IM	257	130	*3158	20x6.50	20x6.50
Stewart 30 X	1	795	Lyc	L	6	3 x4¾	201.5	23.8	60@2800	G	Fed	Borg	Spic	Ross	Str	P	DR W-G		4	Sal	Sp	35.1	B4IM	257	130	3199	20x6.50	20x3.50
Stewart 42X	1½	793	Lyc	..	6	3¼x4½	224.0	25.3	62@2600	—	Fed	—	—	—	Zen	—	— —	—	—	Cla	—	—	——	—	134	3250	20x6.50	20x6.50
Stewart 40 X A	1½	995	Lyc	L	6	3¼x4½	224.0	25.3	62@2600	G	Fed	Borg	Spic	Ross	Zen	P	DR W-G		4	Sal	Sp	35.1	B4IM	257	145	3574	20x6.50	20x6.50D
Stewart 50X	2	1195	Lyc	L	6	3⅜x4½	242.0	27.3	65@2800	G	Fed	Borg	Spic	Ross	Zen	P	DR W-G		4	Cla	Sp	35.1	B4IM	257	145	4165	20x6.50	20x6.50DB
Stewart 43X	2	995	Lyc	L	6	3¼x4½	242.0	27.3	62@2800	—	—	—	—	Ross	—	—	DR —		4	—	Sp	—	B4	—	145	4005	20x6.50	20x6.50DB
Stewart 29 X S	2	1695	Lyc	L	6	3¾x4½	298.0	33.7	85@2750	G	Fed	Ful	Spic	Ross	Str	P	DR Ful		4	Cla	Sp	44.1	B4IM	307	145	5194	20x7.00	20x7.00D
Stewart 32 X	2½	1990	Lyc	L	6	3¾x4½	298.0	33.7	85@2750	G	Fed	Ful	Spic	Ross	Str	P	DR Ful		4	Cla	Sp	46.1	B4IM	348	165	6552	20x7.00	20x7.00D
Stewart 58-S	2½	2390	Lyc	L	8	3¾x4½	322.0	36.5	100@2800	G	Fed	Ful	Spic	Ross	Str	P	DR Ful		4	Cla	Sp	46.1	B4IM	348	170	6170	20x7 50	20x7.50DB
*Stewart 18 X	3	2690	Lyc	L	6	3⅞x5	310.0	36	85@2750	G	Fed	Ful	Spic	Ross	Str	P	DR Ful		4	Tim	Wo	48.1	B4IM	452	165	6245	20x7.50	20x7.50D
Stewart 48-S	3	2990	Lyc	L	8	3¾x4¾	420.0	45.0	130@2800	G	Fed	Br-L	Spic	Ross	Str	P	DR Br-L		4	Cla	Sp	46.1	B4MV	348	170	6750	8.25x20B	8.25x20DB
Stewart 19 X	3½	3690	Lyc	L	6	3⅞x5	354.0	36.2	90@2750	G	Fed	Ful	Spic	Ross	Str	P	DR Ful	12	Tim	Wo	105.1	B4IM	452	165	7474	20x9.00	20x9.00D
Stewart 38-S	3½	3990	Lyc	L	8	3¾x4¾	462.0	45.0	130@2800	G	Fed	Borg	Spic	Ross	Str	P	DR Br-L	12	Tim	2R	105.1	B4IMV	452	170	7964	20x9.00	20x9.00D
Stewart 38-6	3½	3990	Wak	L	6	4⅜x5⅛	420.0	45.9	100@2000	G	Fed	Borg	Spic	Ross	Str	P	DR Br-L	12	Tim	2R	105.1	B4IMV	452	170	7964	20x9.00	20x9.00D
Stewart 31 X	5	5190	Wak	L	6	4⅜x5⅛	516	51.2	110@2000	G	Mod	Br-L	Spic	Ross	Str	P	DR Br-L	12	Tim	Wo	105.1	B4IMV	564	165	9885	20x9.75	20x9.75D
Stewart 27 X S	7	6190	Wak	L	6	4⅜x5⅛	516	51.2	110@2000	G	Mod	Br-L	Spic	Ross	Str	P	DR Br-L	12	Tim	Wo	105.1	W4I	759	165	10762	24x10.50	24x10.50D
Studebaker	1½	670	Own	L	6	3¼x4⅜	230.2	25.4	75@3200	—	McC	Long	Spic	Ross	Str	P	DR WG		4	Cla	Sp	36.2	B4IM	231	130	3110	20x6.00	32x6
Studebaker	1½	695	Own	L	6	3¼x4⅜	230	25.4	75@3200	——	McC	Long	Spic	Ross	Str	P	DR W-G		4	Cla	Sp	36 2	B4IM	231	141	3165	20x6.00	32x6
Studebaker	1½	745	Own	L	6	3¼x4⅜	230.2	25.4	75@3200	—	McC	Long	Spic	Ross	Str	P	DR WG		4	Cla	Sp	36.2	B4IM	231	165	3225	20x6.00	32x6
Studebaker	2	895

DREYSTADT NAMED WORKS MANAGER FOR CADILLAC MOTOR CO.

(Continued from Page 1)

try and abroad, and a practical knowledge of dealer-distributor problems gained from retail sales experience and his present position.

One of the first to adopt the national flat-rate system in dealer service, Dreystadt is closely identified with the development of many other parts and service merchandising practices which have since been almost universally adopted by the industry. Dreystadt originated Cadillac's residential service system, which proved so popular that it has been adopted by several other companies within the past two years.

Completing his education in Germany, Dreystadt received his early mechanical training in European automobile plants. He came to this country in 1912 and after four years of general shop work, joined the Cadillac retail sales force in Chicago. In 1918 he became Cadillac shop superintendent in that city, and in 1922 he was appointed service manager of the Chicago branch.

Four years later he was called to Detroit and appointed general parts and service manager, which position he has since occupied. Dreystadt's appointment is effective May 1. W. A. Houser, associated with Dreystadt for many years, will succeed him as parts and service manager.

SANFORD MILLS TO TAKE OVER L. C. CHASE CO.

New York, April 28.—The Sanford Mills, Sanford, Me., will take over the L. C. Chase Company, textile selling house, on May 1. The Chase Company, which is at present a partnership selling for the Sanford Mills, the Troy Blanket Mills and the Reading Rubber Company, will become a division of the Sanford Mills, with headquarters at New York.

FINANCIAL NEWS

STUDEBAKER CORP.

South Bend, April 28.—Directors of the Studebaker Corporation yesterday omitted the regular quarterly dividend of 30 cents a share on the common stock, but declared the regular quarterly distribution of $1.75 a share on the preferred, payable June 1 to holders of record May 10. Omission of the common dividend was intimated by President Erskine at the Studebaker annual meeting on Tuesday.

WESTINGHOUSE AIR BRAKE

New York, April 28.—Westinghouse Air Brake and subsidiaries for the three months to March 31 report net income of $379,594 after depreciation and taxes. This was equal to 12 cents a share on the 3,125,800 shares outstanding, compared with net of $990,529 in the first quarter of 1931, or 31 cents a share on 3,172,111 shares outstanding.

CONTINENTAL-DIAMOND FIBRE

New York, April 28.—Stockholders of the Continental-Diamond Fibre Company, at a special meeting yesterday, approved the reduction in the stated value of the capital stock to $5 and the change in the par value to $5 a share from no par. Albert W. Pickford was elected a director, succeeding J. M. Taylor.

BENDIX AVIATION

Chicago, April 28.—Bendix Aviation Corporation action on the July 1 quarterly dividend scheduled for April 25 has been postponed until May 23. The last previous payment of 15 cents a share was made April 1, 1932.

PIERCE-ARROW

Buffalo, N. Y., April 28.—Pierce-Arrow Motor Car Company passed the dividend on the 6 per cent. preferred stock on which the company paid $1.50 a share March 1, 1932.

SCOVILL MFG. CO.

Waterbury, Conn., April 28.—All officers and directors were re-elected at the annual meeting of directors and stockholders of the Scovill Manufacturing Company here. The officers re-elected are: President and general manager, Edward O. Goss; vice-president and general superintendent, John H. Goss; vice-presidents, George A. Goss, Chauncey P. Goss, Jr., Bennet Bronson, treasurer, Leavenworth P. Sperry; secretary, William M. Goss; assistant treasurers, Frank J. Gorse, John V. Montague; assistant secretaries, Burdon P. Hyde, Thomas B. Myers, W. W. Bowers, C. F. Doherty. Mr. Montague was elected assistant treasurer since the previous annual meeting. Before that he had been assistant controller. Directors were re-elected as follows: E. O Goss, J. H. Goss, Austin L. Adams, Bennet Bronson, John P. Elton, W. Shirley Fulton, C. P. Goss, Jr., G. A. Goss W. M. Goss, William T. Hunter, H. Lamson Scovill, L. P. Sperry, Roger S. Sperry and Francis T. Ward.

AMERICAN MACHINE

New York, April 28.—American Machine and Metals, Inc., and subsidiaries report for the quarter ended March 31: Net loss after depreciation, interest and other charges, $113,789, compared with $83,001 loss last year.

BRIGGS & STRATTON

New York, April 28.—Briggs & Stratton reports for the quarter ended March 31: Net profit after taxes and other charges, $8,959, equal to 3 cents a share on 300,000 no par shares, compared with $196,648, or 65 cents a share, last year. Current assets as of March 31, were $2,260,988 and current liabilities $248,284, compared with current assets of $2,373,360 and current liabilities of $311,308, as of December 31, 1931.

COLONIAL BEACON OIL

New York, April 28. — Colonial Beacon Oil Company (controlled by Standard Oil Company of New Jersey) reports for the quarter ended March 31: Net loss after interest, depreciation and other charges, $865,902, compared with $1,005,011 loss last year.

JOBBER ADVANTAGES LISTED IN FOLDERS ISSUED BY M. E. W. A.

(Continued from Page 1)

and handling costs are reduced. Sales are not lost through inability to secure shipments as required. The dealer secures many valuable suggestions from wholesalers' salesmen with whom he is in close contact. Adjustments are handled without delay or difficulty.

"Dealers' purchases carry the guarantee of both the wholesaler and the manufacturer. Credit can be secured promptly, and in periods of stress it is possible to secure special consideration or assistance without difficulty or embarrassment. Losses from waste, breakage, deterioration and obsolescence are less. The wholesaler purchases from hundreds of manufacturers, thus assembling at convenient points complete stocks for the convenience of dealers. Dealers' purchases can be handled with less difficulty through consolidating many items on one order."

PLAN TO SELL DURANT PLANT FOR MORTGAGE

Elizabeth, N. J., April 28.—Management of the Durant plant in Newark Avenue will be in the hands of a mortgage receiver, S. A. Young of Newark, until foreclosure proceedings are finished, according to a Chancery Court order in effect today. The National Newark and Essex Banking Company, Newark, is trustee for the holders of $770,000 in bonds, whose claim will be satisfied through the foreclosure.

The plant will be offered for sale to pay the mortgage, and the Durant Company will participate in any receipt in excess of the claims against it. In addition to the mortgage sum, interest is reported to be due over a long period and also $141,309 in taxes is unpaid.

The Bayway Terminal, Inc., who took over the Newark Avenue property nearly a year ago and attempted to convert it into an industrial terminal, abandoned the property March 1 under court order, after the company became involved in financial troubles.

M. E. M. A. REVAMPS CREDIT DEPARTMENT; SEPARATES GROUPS

(Continued from Page 1)

Merz to Detroit, where he will continue his work in connection with manufacturers' credits. The Detroit offices will remain at the same address, First National Bank Building, although larger quarters have been taken in the building.

The reorganization is the culmination of considerable study by the credit department committee, of which M. A. Moynihan, Gemmer Manufacturing Company, is chairman. Members of the committee and directors of the association are confident that the new arrangement will result in even better service to all members, inasmuch as it makes possible a degree of specialization that is greater than any ever attempted by the association.

The M. E. M. A. credit department has been functioning continuously for twenty-four years. It is recognized by many manufacturers as the outstanding source of credit information on automotive and closely allied industries. Built around the constant interchange of members' actual ledger experience, and supplemented by field investigations and by direct interchange of vital information at monthly group meetings of members' credit executives, it offers opportunities for developing an understanding of customers which are not available through any other source.

Major Specifications and Mechanical Details of 1932 Commercial Cars

LEADING MAKES NATIONALLY DISTRIBUTED

(Continued from Page 10)

Make and Model	Capacity—Tons or Lbs.	Chassis Price	Engine	Valve Arr'g'm't	No. of Cyls.	Bore and Stroke	Piston Disp.	Tax H. P.	Max. Brake H. P. and Peak R. P. M.	Type Camshaft Drive	Radiator Make	Clutch Make	Universals Make	Steering Gear Make	Carburetor Make	Fuel Feed Type	Make Electr'l System	Transmission	No. Spds. For.	Rear Axle Make	Type	Final Drive	Final Gear Reduction	Type Service Brakes	Area Service Brake Lining	Standard Wheel Base	Chassis Wgt.	Standard Tire Sizes Front	Rear
White 630 A		*22000	5003	Own	H	6	4 x5¼	396.0	38.4	100@2100	C	Own	Own	Spic	Ross	Zen	P	DR	Own	4	Own	Sp	41.4	L4IHV	553	168	8500	20x9.00B	20x9.00DB
White 641		*24000	6450	Own	H	6	4⅝x5¾	519.0	45.9	108@1800	C	Own	Own	Spic	Ross	Zen	P	L-N	Own	4	Own	2R	46.9	O4IA	585	180	9700	20x9.75B	20x9.75DB
*White 630	SW200	*24000	6280	Own	H	6	4 x5¼	396.0	38.4	82@1800	C	Own	Own	Spic	Ross	Zen	P	DR	Own	4	Tim	Wo	44.2	OTIHV	514	193	10000	20x8.25DB	20x8.25DB
White 631		*24000	5750	Own	H	6	4 x5¼	396.0	38.4	82@1800	C	Own	Own	Spic	Ross	Zen	P	DR	Own	4	Own	2R	56.9	O4IHV	585	168	9000	20x9.25B	20x9.25DB
*White 642	SW310	*34000	8045	Own	H	6	4⅝x5¾	519.0	45.9	108@1800	C	Own	Own	Spic	Ross	Zen	P	L-N	Own	4	Tim	Wo	55.6	OTIA	588	198	12670	20x9.00B	20x9.00DB
White 58 SS		*30000	5300	Own	L	4	4¼x5¾	326.0	28.9	54@1600	G	Own	Own	Spic	Ross	Zen	P	L-N	Own	4	Own	Wo	77.6	OPXM	224	196	9300	24x10.50B	24x10.50DB
White 643		*32000	6950	Own	H	6	4¾x5¾	519.0	45.9	108@1800	C	Own	Own	Spic	Ross	Zen	P	L-N	Own	4	Own	2R	66.5	O4IA	623	180	10900	24x10.50B	24x10.50DB
White 642		*28000	6750	Own	H	6	4⅜x5¾	519.0	45.9	108@1800	C	Own	Own	Spic	Ross	Zen	P	L-N	Own	4	Own	2R	66.5	O4IA	623	180	10600	24x9.75B	24x9.75DB
*White 643	SW410	*40000	8570	Own	H	6	4⅜x5¾	519.0	45.9	108@1800	C	Own	Own	Spic	Ross	Zen	P	L-N	Own	4	Tim	Wo	69.1	OTIA	588	193	14400	40x8	40x8D
Willys-Overland 6-C-113	½		415	Own	L	6	3¼x3⅞	193.0	25.3	65@3400	C	Fed	Own	Spic	Own	Til	P	Aut	Own	3	Own	Sp	12.4	B4IM	143	113	1920	20x5.50	32x6
Willys-Overland 6-C-131	1½		595	Own	L	6	3¼x3⅞	193.0	25.3	65@3400	C	Fed	Own	Spic	Own	Til	P	Aut	W-G	4	Cla	Sp	40.8	B4IM	235	131	2625	20x5.50	32x6
WillysOverland 6-C-157	1½		635	Own	L	6	3¼x3⅞	193.0	25.3	65@3400	C	Fed	Own	Spic	Own	Til	P	Aut	W. G	4	Cla	Sp	40.8	B4IM	235	157	2900	19x5.00	19x5.50

GENERAL NOTATIONS

***†REFERENCE MARKS** apply to individual lines only and explanations are given under the subdivision for each company in the "SPECIAL NOTATIONS."

CAPACITIES given in this table are in tons or fractions of tons. ***Shows maximum allowable gross weight in pounds.

ENGINE—Bud, Buda; Con, Continental; Her, Hercules; Lyc, Lycoming; Pont, Pontiac; Wak, Waukesha; Wis, Wisconsin; Hall, American Car & Foundry; Ster, Sterling Engine Co.

VALVE ARRANGEMENT—L, "L" head; H, in head; O, overhead; S, sleeve.

TYPE OF CAMSHAFT DRIVE—G, ...r; C, chain.

RADIATOR MAKE—G&O, G & O Mfg Co.; Per, Perfex Corp.; Long, Long Mfg Co.; Har, Harrison Radiator Corp.; Fed, Fedders Mfg Co.; McC, McCord Radiator & Mfg. Co.; Mod, Modine Mfg. Co.; Hex, Hexcel Radiator Co. Yo-Young.

CLUTCH MAKE—Jon, Jones Clutch & Gear Co.; Ful, Fuller & Sons Mfg. Co.; Borg, Borg & Beck Co.; Br-L, Brown Lipe Gear Co.; Rock, Rockford Drill & Machine Co.; Cov, Covert Gear Co.; Long, Long Mfg. Co.; Detr, Detroit Gear & Machine Co.; Mer, Merchant & Evans; Hel, Merchants & Evans.

UNIVERSALS MAKE — Spic, Spicer Mfg Co.; Blo, Blood Bros. Machine Co.; Sup, Superior Universal Products; Un, Universal Products Co.; Cle, Cleveland Steel Products Corp.; Pet, Peters; Opt, Optional; Mec, Mechanics Machine Co.

STEERING GEAR MAKE—Ross, Ross Gear & Tool Co.; Han, Hannum Mfg. Co. Sag, Saginaw Steering Gear Co.; Gem, Gemmer Mfg. Co.; Col, Columbus Gear Pump Co.; W-G, Warner Gear Corp.

CARBURETOR—Car, Carter; Mar, Marvel; Sch, Wheeler-Schebler; Str, Stromberg; DL, Detoit Lubricator; Til, Tillotson; Zen, Zenith-Detroit.

FUEL FEED—Gra, gravity; Vac, vacuum tank, P, fuel pump.

ELECTRICAL SYSTEM — AB, American-Bosch; Aut, Electric Auto-Lite; Eis, Eisemann; L-N, Leece-Neville; NE, North East; RB ,Robert Bosch; DR, Delco-Remy.

TRANSMISSION—Br-L, Brown-Lipe; Cov, Covert; Ful, Fuller; Mec, Mechanics Machine; Mun, Muncie; W-G, Warner Gear; Cot, Cotta Gear Co.; Cla, Clark Equipment Co.

REAR AXLE—Cla, Clark Equipment; Col, Columbia; Eat, Eaton; Pont, Pontiac; Sal, Salisbury; Tim, Timken; Wis, Wisconsin.

FINAL DRIVE—IG, internal gear; St, straight bevel; Sp, spiral bevel; Wo, worm; 2R, double reduction; Ch, chain; S-T, semi-transverse.

TYPE OF SERVICE BRAKES—

B4IM, Bendix, 4 wheel, internal mechanical; B4MV, Bendix, 4 wheel, mechanical, vacuum; B6IA, Bendix, 6 wheel, internal, air; E4IMV, Bendix, 4 wheel, internal, mechanical, vacuum; BO4IMV, Bendix, own, 4 wheel, internal, mechanical, vacuum; BrIA, Bendix, operating on 4 rear wheels, internal air; BW4IM, Bendix front, Wisconsin rear, 4 wheel, internal, mechanical; BE4IM, Bendix front, Eaton rear, 4 wheel, internal, mechanical; B4IH, Bendix, 4 wheel, internal, hydraulic.

CB4IM, Columbia, Bendix, 4 wheel, internal, mechanical; C4IM, Columbia, 4 wheel, internal, mechanical; K2IM, Clark, 2 wheel, internal, mechanical; CR4IA, Christensen-Relay, 4 wheel internal, air.

L4IHVA, Lockheed, 4 wheel, internal, hydraulic, vacuum, air; LO4ID, Lockheed, own, 4 wheel, internal, drive shaft; LO4IV, Lockheed, own, 4 wheel, internal, vacuum; LT4DV, Lockheed, Timken, 4 wheel, drive shaft, vacuum; L4IH, Lockheed, 4 wheel, internal, hydraulic; L4IHA, Lockheed, 4 wheel, internal, hydraulic, air; L4IHV, Lockheed, 4 wheel, internal, hydraulic, vacuum; LT4IHV, Lockheed, Timken, 4 wheel, internal, hydraulic, vacuum; LT4IVA, Lockheed, Timken, 4 wheel, internal, vacuum, air; L6IHV, Lockheed, 6 wheel, internal, hydraulic, vacuum; L6IH, Lockheed, 6 wheel, internal, hydraulic.

O2IM, Own, 2 wheel, internal, mechanical; O2IV, Own, 2 wheel, internal, vacuum; O4IA, Own, 4 wheel, internal, air; O4IH, Own, 4 wheel, internal, hydraulic; O4IHV, Own, 4 wheel internal, hydraulic, vacuum; O4IM, Own, 4 wheel, internal, mechanical; O4IV, Own, 4 wheel, internal, vacuum; O4M, Own, 4 wheel, mechanical; O2XM, Own, 2 wheel, external, mechanical; O4XM, Own, 4 wheel external, mechanical; O6IA Own, 6 wheel, internal, air; OJXM, Own, jack shaft, external, mechanical; OL4IHV, Own, Lockheed, 4 wheel, internal, hydraulic, vacuum; OPX, Own, propeller shaft, external; OPXM, Own, propeller shaft, external, mechanical; OPM, Own, propeller shaft, mechanical; ORIV Own, rear wheels, internal, vacuum; OTIHV, Own, Timken, internal, hydraulic, vacuum.

S4IM, Steeldraulic, 4 wheel, internal, mechanical.

T4rIA, Timken, operating on 4 rear wheels, internal, air; T4IA, Timken, 4 wheel, internal, air; T6IA, Timken, 6 wheel, internal, air; T2IMV, Timken, 2 wheel, internal, mechanical, vacuum.

W4I, Westinghouse, 4 wheel, internal, W4IA, Westinghouse, 4 wheel, internal, air; W6IA, Westinghouse, 6 wheel, internal, air; 4IA, 4 wheel, internal, air; 4IH 4 wheel, internal, hydraulic; 4M, 4 wheel, mechanical.

-T, Tru-stop. *Models on which Tru-stop is optional.

WHEEL BASES given are standard, but optional wheel bases are available in many cases.

***CHASSIS WEIGHT according to Automotive Daily News formula, which is the chassis with gas, oil, water and spare tire, but without cab or other equipment.**

TIRES—B, balloon; D, dual; S, solid; P, pneumatic.

SPECIAL NOTATIONS

AUTOCAR

†Engines in these models are located under the driver's seat.

*Six-wheeler.

Model R also available on 171 and 189 inches wheel base.

BROCKWAY

*Models equipped with twin ignition.

CHEVROLET

Utility model available on 131-inch wheel base with chassis weight of 2,760 pounds and equipped with dual rear wheels.

DIAMOND T

*Six-wheelers.

Additional standard wheel bases available as follows:—

551	158	750	167, 192
504	166½	801	180½, 199¼
506	174	1200	174½, 180
603	157, 179	1600	174½, 180
606	177½	1601	184

DODGE

*Models F40, F41, F61 and F62 can be had with double drop frame.

FEDERAL

*Six-wheelers.

*Also rated in pounds of total allowable weight as follows:

D 3	8500	T 10 W	18,000
E 3	8,500	T 10 D R	18,000
F 7	10,000	U 6	21,000
F 8	11,500	U 6 D R	21,000
A 6	13,500	A 6 S W	18,500
A 6 T	15,000	C 7	24,000
A 6 T W	15,000	C 7 W	24,000
T 3 W	14,000	C 8	24,000
T 8 W F	15,000	C 8 W	24,000
D 2 S W	12,500	X 8	30,000
E 2 S W	12,500	X 8 D R	30,000
D 2 D	12,500	X 8 R	30,000
2 E D	12,500	X 8 R D R	30,000
T 10 B	18,000		

†Both the four and six cylinder are also offered in 157-inch wheel base at $1,145 and $1,345, respectively.

GENERAL MOTORS TRUCK

*Capacity indicated is the Shraight Rating (combined weight of chassis body, equipment and pay load) for which each chassis is designed and guaranteed to satisfactorily operate under average conditions. The size of the tires used does not affect this Straight Rating, but to secure maximum tire mileage it is suggested that the total gross weight be limited to a 'recommended gross weight' for each tire equipment based on tire capacity. Prices cover base chassis and vary with wheel base and tire combinations. The number of wheel base lengths, tire types, range of 'recommended gross weights' and resulting pay load range (assuming nominal body allowance' for each model follows:—

Note: Models T-15 to T-61, inclusive, are available for export only as coach chassis.

Model	Wheel Bases	Tire Types	Range of "Rec. Gross Weights"	Pay Load Range
T-11	1	1	3800	½
T-15	3	10	4500- 6500	½-1½
T-18	..	..	7500- 8200	1½-2
T-19	3	..	7500-10000	1½-2½
T-25	3	17	6800- 9000	1½-2
T-26	4	..	8500-11000	2-3
T-30	3	15	10000-12500	2-3
T-31	4	..	11000-14000	2½-4
T-42	4	12	12000-15000	2½-4
T-44	4	12	12000-16000	3-4½
T-45	4	..	13500-16000	3-4½
T-51	4	..	16500-19000	4-5½
T-60	4	18	18500-22000	5-6½
T-61	4	..	19500-22000	5-6½
T-82	4	12	19000-24000	5-7
T-83	4	..	20000-24000	5-7
T-85	3	..	25000-30000	6-8
T-90	3	7	22000-28000	5-7½
T-95	3	..	30000-40000	7-11

Optional rear axle gear ratios available for all models, except Model T-18. Double reduction axles available for Models T-45, T-51, T-60, T-61, T-82, T-83 and T-95.

GRAMM

Series	Straight Rating	Wheel Base		Pay Load Range
AX 4	8,000	157	1	to 1½ tons
AX 6	8,000	157	1	to 1½ tons
BX 4	10,000	157	1½	to 2 tons
BX 6	10,000	157	1½	to 2 tons
CX 4	12,000	157-180	2	to 3 tons
CX 6	12,000	157-180	2	to 3 tons
B	12,000	157-174	1¾	to 2½ tons
C	14,000	145-196	2	to 3 tons
D	17,000	145-196	2½	to 4 tons
E	20,000	145-224	3	to 4½ tons
EY	.....	.....	3	to 4 tons
G	24,000	165-235	4	to 6 tons
G 8	24,000	165-235	4	to 6 tons
GY	.....	.....	4	to 5 tons
GW	28,000	157-240	5	to 7½ tons
HY	.....	.....	5	to 6½ tons

†Both the four and six-cylinder are also offered in 157-inch wheel base at $1,145 and $1,345, respectively.

INDIANA

*Six-wheelers.

INTERNATIONAL

*Stromberg carburetor optional.

MACK

Other wheel bases furnished on all truck models.

On 6-wheel jobs 4 rear wheels driven by chains, foot brake on 4 rear wheels.

††Made also in tractor models.

PIERCE-ARROW

*Optional final drive on Models PW, PX, PY and PZ.

REO

Models DF, FA, FE and FF are available with dual wheels at additional cost.

*Model DF X can be had with 3 speed transmission and single tires for $395.

STEWART

Models 30 and 30X can also be supplied in 120, 140 and 160-inch wheel base.

Models 40XA can also be supplied in 134, 145, 160 and 176-inch wheel base.

Model 29XS can be supplied in 135, 160, 176 and 190-inch wheel base.

*Models 18X and 32X can be supplied in 148, 190 and 220-inch wheel base.

*Models 19X, 31X and 27XS can be supplied in 148, 172, 190, 220 and 235-inch wheel base.

As optional equipment Models 18X, 19X, 31X and 27XS can be supplied with Timken dual redcution rear axle.

Models 38-8, 38-6, 48-8 and 58-8 can be supplied in 160, 170, 180, 196, 226 and 241-inch wheel base and worm axle.

WHITE

*Six-wheelers.

Talk
To Owners of 43 Trucks
For *1* Cent

THERE are 16,000 companies in this country operating 10 or more commercial vehicles. These 16,000 companies operate 1½ million vehicles. Included in this number are 1,150 companies with 100 or more trucks. It requires 25,000 mailing pieces to reach the entire group.

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The issue of May 20th also will reach every exclusive truck dealer in the country, about 8,000 passenger car dealers and every important manufacturing executive in the industry.

A full page advertisement at $350 brings your advertising cost down to owners of 43 trucks for 1 cent, the lowest cost at which you can reach this group in any other way and yet that group represents a bonus distribution.

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If you want to sell goods at low cost to the truck field, it should be obvious that the issue of May 20th will do it.

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